

JPRS-EEI-84-120

1 November 1984

East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS



FOREIGN BROADCAST INFORMATION SERVICE

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

1 November 1984

EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

CONTENTS

INTERNATIONAL AFFAIRS

Schuerer, USSR Discuss Cooperation in Petrochemical Industry (NEUES DEUTSCHLAND, 21 Sep 84)	1
--	---

Briefs

GDR, USSR Petroleum Agreement	2
GDR, USSR Chemical Processing	2
GDR, USSR Electronics Cooperation	3

CZECHOSLOVAKIA

Briefs

Hungarian Finance Minister's Visit	4
Police Apprehend Speculators	4
Czech Field Work Progress	4
Forged Dollars, DM	4
Gallium Exports	5
Message From Khamene'i	5
Visiting Argentine Official	5
Guest From Argentina	5
Protocol With Argentina	5
Cooperation With USSR	5
Ehrenberger Returns	5
French Delegation Departs	5
Britain's Lord Walston Received	6
Iraqi Delegation's Departure	6
Accord With Hungary	6
Protocol With Mongolia	6

GERMAN DEMOCRATIC REPUBLIC

New Resolution Outlines Combine Planning, Managerial Process (Hans Schilar; EUROPÄISCHE RUNDSCHAU, No 3, Summer 1984)	7
New Agricultural Equipment-Assembly Tills Soil Efficiently (O. Busse, W.-D. Kalk; BAUERN-ECHO, 12 Sep 84)	20

Land Reclamation Initiated in Strip-Mining Regions (DER MORGEN, 8 Aug 84; NEUES DEUTSCHLAND, 2 Aug 84)	23
Lakes Created From Quarries, Doris Werner, Borna Kreis Interview Agricultural Land Restored, by Harri Bernstein	
Glass Pipelines, Tubes for Chemical, Electronics Industries (Michael Best; NEUES DEUTSCHLAND, 4, 5 Aug 84)	27
Briefs	
Environmental Cooperation With Norway	29
New Crane Produced	29
Plastic Construction Material Developed	30
HUNGARY	
Supervision of Legality of New Types of Enterprises Discussed (Lajos Bosanszky; FIGYELO, No 83, 20 Sep 84)	31
Operation of Industrial Enterprises in 1983 Examined (Katalin Kovacs, Fazekas; FIGYELO, No 37, 13 Sep 84) ...	36
Taxation, Economic Growth Viewed (Antonia Huttli; FIGYELO, No 34, 23 Aug 84)	41
Study on Economic Calculation Discussed (Otto Gado; FIGYELO, No 34, 23 Aug 84)	44
POLAND	
Auto Industry Production Plans, Problems Summarized (Jerzy Dobosz; MOTORYZACJA, No 5, May 84)	48
Loss of Farmland in Individual Provinces Reported (Mikolaj Zinzuk; WIADOMOSCI STATYSTYCZNE, No 6, Jun 84)	55
Quality of Domestically Produced Wheat Should Be Improved (Marian Milczak; RZECZPOSPOLITA, 18 Jul 84)	62
YUGOSLAVIA	
Situation of Loss-Producing Enterprises in Slovenia (Stane Pucko; VJESNIK, 17 Aug 84)	66
Energy Plans in Croatia to 1990 (J. Grubic; PRIVREDNI PREGLED, 22 Aug 84)	70
Slovenia Substituting Gas for Fuel Oil (PRIVREDNI PREGLED, 22 Aug 84).....	72

SCHUERER, USSR DISCUSS COOPERATION IN PETROCHEMICAL INDUSTRY

East Berlin NEUES DEUTSCHLAND in German 21 Sep 84 p 6

[Article: "Comprehensive Cooperation Between GDR and USSR in Chemistry"]

[Text] Berlin (ADN). Candidate of the Politburo of the SED Central Committee and chairman of the GDR National Planning Commission, Gerhard Schuerer, met on Thursday with the minister for the Petroleum Processing and Petrochemical Industry of the USSR, Viktor Fjodorow, for a friendly conversation. The Soviet guest is participating in the 59th meeting of the CEMA Permanent Commission for the Petroleum and Gas Industry in Gera.

The two praised the comprehensive cooperation between the GDR and the USSR in the field of chemistry as well as in chemical-facility construction and discussed questions of further intensification of this cooperation from both bilateral and multi-lateral perspectives. Starting from the results of the economic deliberations of the CEMA countries at the highest level and the June agreements between the general secretary of the SED Central Committee and chairman of the GDR National Council, Erich Honecker, and the general secretary of the Soviet Communist Party Central Committee and chairman of the Presidium of the Supreme Soviet of the USSR, Konstantin Tschernenko, concrete measures are being defined for this intensified cooperation within the framework of the present coordination of the 1986-1990 Five-Year Plan.

Victor Fjodorow stressed the fact that the GDR, with the export of complete facilities for the petroleum processing and petrochemical industry of the USSR, is making an important contribution to the development this branch of Soviet industry. - Gerhard Schuerer underscored the great importance of the Soviet Union's provision of raw materials, equipment and products for the stable and dynamic development of the economy of the GDR.

During the course of the conversation, additional steps for expanding scientific-technical cooperation and for increasing trade between the two countries in the field of chemistry and chemical-facilities construction in coming years was discussed.

The minister for the Chemical Industry of the GDR, Guenther Wyschofsky, took part in the consultation.

Also present was the leader of the permanent delegation of the Soviet contingent of the Balanced Governmental Commission in the GDR, Embassy Advisor Nikolai Baturin.

9160

CSO: 2300/22

BRIEFS

GDR, USSR PETROLEUM AGREEMENT--Leipzig (ND). On Wednesday an agreement was concluded in Leipzig between the PCK Schwedt and the Sojusneftexport foreign trade organization relating to the delivery of 17.1 million tons of petroleum from the Soviet Union to the GDR in 1985. The agreement assures the continuance of the Soviet supply of this extremely important raw material for the dynamic and stable development of the GDR. On Wednesday other economically important agreements concerning trade between the USSR and the GDR were signed. Under these agreements, the GDR will import kola apatite concentrate, a starting material for manufacturing phosphate fertilizers. The GDR will supply hydraulic components destined for the Soviet automobile industry. And the foreign trade factory Heim Electric will export automotive electrical equipment and spark plugs to the USSR. The total value of these agreements is 11 million rubles. The foreign trade factory Polygraph made agreements for 1985 sales of polygraph machines. A satisfactory agreement was reached in Leipzig with the Soviet partner firm Promaschimport relating to the delivery of Rollen rotary offset presses and binding and cutting machines. In 1985 the foreign trade operation Chemie will supply cosmetics, toothpaste and soap worth 71 million rubles. GERMED signed an agreement concerning the export of veterinary pharmaceuticals valued at 45 million rubles. TechnoCommerz sold for 1985 delivery to several Soviet partners refrigeration and airconditioning equipment valued at over 20 million rubles. Other agreements were also signed relating to the supply of various garage and automotive service equipment items worth 2 million rubles. This equipment will come from the VEB Mechanics Karl Marx City and the VEB Special Tool Factory Zella-Mehlis. [Text] [East Berlin NEUES DEUTSCHLAND in German 6 Sep 84 pp 1,2] 9160

GDR, USSR CHEMICAL PROCESSING--Moscow (ADN). An agreement has been signed in Moscow between the Soviet foreign trade association "Techmaschimport" and the FRG firm Salzgitter AG concerning the construction of a complex facility for the production of methane acid in the USSR. As reported by EKONOMITSCHESKAJA GASETA, the erection of the facility with an annual capacity of 40,000 tons shall be completed by 1986. Salzgitter AG has maintained a business connection with "Techmaschimport" since 1960 and has already delivered a series of production units for manufacturing high-pressure and low-pressure polyethylene, ethylene and other chemical products in the Soviet Union. [Text] [East Berlin NEUES DEUTSCHLAND in German 20 Jul 84 p 5] 9160

GDR, USSR ELECTRONICS COOPERATION--The longterm scientific and production cooperation between the GDR and the USSR in the field of electronics is the focal point of the discussions between the minister for electrical technology and electronics, Felix Meier, and the minister for the Soviet electronics industry, Alexander Scho-kin, member of the Soviet governmental delegation to the Leipzig Autumn Fair. Starting with the good results already achieved from cooperative efforts, tasks for 1985 and following years were discussed on the basis of existing governmental agreements. During the course of the day, the ministers visited exhibits of sev-eral GDR combines and factories. [Text] [East Berlin NEUES DEUTSCHLAND in German 4 Sep 84 p6] 9160

CSO:2300/22

CZECHOSLOVAKIA

BRIEFS

HUNGARIAN FINANCE MINISTER'S VISIT--Hungarian Finance Minister Istavan Hetenyi, who arrived for a working visit to the CSSR on 4 October, was received the same day by CSSR Deputy Premier Rudolf Rohlicek and by Svatopluk Potac, CSSR deputy premier and chairman of the State Planning Commission. [Summary] Prague RUDE PRAVO in Czech 5 Oct 84 p 2 AU] Hungarian Finance Minister Istavan Hetenyi ended his working visit to the CSSR on 6 October. "The talks he held with Czechoslovak representatives will contribute to deepening the two countries' economic relations." Hetenyi was seen off at Ruzyne Airport by CSSR Finance Minister Leopold Ler and by the Hungarian ambassador to the CSSR, Bela Kovacs. [Summary] Bratislava PRAVDA in Slovak 8 Oct 84 p 2 AU]

POLICE APPREHEND SPECULATORS--Several dozen policemen carried out a "preventive action" in Havelka Street in Prague on 30 September, apprehending more than 70 "speculators" guilty of "illegally" selling the "usual" assortment of goods: Digital watches and batteries for them, denim wear, cosmetics, costume jewelry, sunglasses, tape recorders and tapes. [Summary] [Prague VECERNI PRAHA in Czech 2 Oct 84 p 3 AU]

CZECH FIELD WORK PROGRESS--In the Czech lands by 1 October cereals had been harvested on 98 percent of the area sown, potatoes on 34 percent, and corn for silage on 48.4 percent of the area. [Summary] [Prague ZEMEDEL'SKE NOVINY in Czech 3 Oct 84 p 4 AU]

FORGED DOLLARS, DM--Attempts to put forged banknotes--mostly U.S. dollars and West German marks--into circulation in the CSSR are becoming increasingly frequent. The banknotes are being smuggled from abroad. Recently, the police "exposed and liquidated" several such speculators--Czechoslovaks as well as foreigners--who were trying to put the forgeries into circulation illicitly by offering them at favorable rates of exchange. Therefore, the USSR Interior Ministry draws citizens' attention to the fact that by an illicit purchase of foreign currencies they not only expose themselves to the possibility of a considerable financial loss, but could also be prosecuted for putting forged banknotes into circulation, and that applied not only on the CSSR territory. [Summary] [Prague RUDE PRAVO in Czech 6 Oct 84 p 2 AU]

GALLIUM EXPORTS--In the first 9 month of the year, the SNP enterprise of Ziar nad Hronom exported to the foreign market super-pure gallium valued at more than Kcs8 million, freight paid. The enterprise will export further gallium, worth Kcs3.6 million, up to the end of the year. Almost 80 percent of the annual gallium production goes to Japan, Great Britain, the FRG, and also to Bulgaria and Poland. [Summary] [Bratislava PRAVDA in Slovak 5 Oct 84 p 2 AU]

MESSAGE FROM KHAMENE'I--Stanislav Svoboda, CSSR's deputy minister of foreign affairs, received on 11 October in Prague Iranian Ambassador Mohammad 'Ali Sarmadi Rad in connection with the message sent to CSSR President Gustav Husak by Iran's President Mohammad 'Ali Khamene'i. [Text] [Prague RUDE PRAVO in Czech 12 Oct 84 p 2 AU]

VISITING ARGENTINE OFFICIAL--Bohuslav Chnoupek, CSSR foreign minister, received on 12 October in the Cernin Palace in Prague Florencio Tenevo, governor of Argentina's Chaco Province, who is currently visiting the CSSR. In a friendly talk they assessed the possibilities of cooperation. [Summary] [Bratislava PRAVDA in Slovak 13 Oct 84 p 2 AU]

GUEST FROM ARGENTINA--Eduard Saul, CSSR minister of metallurgy and heavy engineering, received on 12 October in Prague Nestor Stancanelli, Argentina's deputy minister of foreign trade and head of the Argentine economic delegation currently visiting the CSSR. They discussed possibilities of further cooperation in power, chemical, and petrochemical engineering. [Summary] Bratislava PRAVDA in Slovak 13 Oct 84 p 2 AU]

PROTOCOL WITH ARGENTINA--The deliberations of the Joint Czechoslovak-Argentine Commission for Economic and Technological Cooperation ended on 12 October in Prague with the signing of the final protocol by Nestor Stancanelli, Argentine deputy minister of foreign trade, and by Jaroslav Jakubec, CSSR deputy minister of foreign trade, in the presence of Angel Maria Oliveri Lopez, Argentine ambassador to the CSSR. [Summary] [Bratislava PRAVDA in Slovak 13 Oct 84 p 2 AU]

COOPERATION WITH USSR--Vlastimil Ehrenberger, CSSR minister of fuel and energy, concluded on 12 October in Moscow his 3-day negotiations with Vasilii Dinkov, USSR's minister of gas industry, on the deliveries of Soviet natural gas to the CSSR, and his negotiations with Boris Bratchenko, USSR minister of coal industry, on mutual cooperation in mining. [Summary] [Bratislava PRAVDA in Slovak 13 Oct 84 p 5 AU]

EHRENBERGER RETURNS--The CSSR delegation which was led by Vlastimil Ehrenberger, CSSR minister of fuel and energy, returned home from Moscow late in the evening of 12 October. With the participation of interested departments it discussed in Moscow further cooperation in the construction of transit gas pipelines. [Text] [Bratislava PRAVDA in Slovak 15 Oct 84 p 5 AU]

FRENCH DELEGATION DEPARTS--The study delegation of the French Communist Party (PCF), led by Andree Lefrere, which visited the CSSR at the CPCZ's invitation on 8-12 October, left Czechoslovakia on 12 October. The delegation studied in the CSSR ideas of social security, health and family care, old-age pensions,

and care for the disabled; it was received at the CPCZ Central Committee's Departments of Economy and of International Policy by representatives of the Federal Ministry of Labor and Social Affairs and of the Czechoslovakia Ministry of Health. [Summary] [Prague RUDE PRAVO in Czech 13 Oct 84 p 8 AU]

BRITAIN'S LORD WALSTON RECEIVED--Jaromir Johanes, CSSR deputy minister of foreign affairs, received Lord Walston, chairman of the British Center for Eastern Europe, in Prague on 8 October. They discussed issues pertaining to CSSR-British relations and topical international problems. On the same day, Lord Walston was also received by Evzen Erban, chairman of the Czechoslovak Society for International Relations. [Summary] [Bratislava PRAVDA in Slovak 9 Oct 84 p 2 AU]

IRAQI DELEGATION'S DEPARTURE--A delegation of the Iraqi Ministry of Planning, led by Mova'iq E. Kadir, [name as published] chairman of the Agricultural Planning Commission, left Prague on 3 October. During their stay, members of the delegation met with Vladimir Janza, minister-deputy chairman of the State Planning Commission, with CSSR Finance Minister Leopold Ler, and with CSSR Minister of Agriculture Miroslav Toman. [Summary] [Bratislava PRAVDA in Slovak 4 Oct 84 p 2 AU]

ACCORD WITH HUNGARY--A delegation of the Hungarian State Office for Labor and Wages, led by its chairman, state secretary Albert Racz, paid a visit to the CSSR at the invitation of Miloslav Boda, CSSR minister of labor and social affairs. During the visit, the delegation exchanged experience acquired from resolving issues in the sphere of remuneration, labor productivity, and legislation. At the end of its stay, an agreement on further bilateral cooperation was signed. [Summary] [Bratislava PRAVDA in Slovak 4 Oct 84 p 2 AU]

PROTOCOL WITH MONGOLIA--A protocol on bilateral goods deliveries and payments in 1985 was signed between the CSSR and the Mongolian Governments in Prague a few days ago. The volume of goods deliveries will be 6 percent greater than in 1984. The CSSR will export to Mongolia mostly diesel aggregates, equipment and spare parts for light industry, medical equipment, buses and spare parts for buses and trucks, chemicals for the footwear and leather-processing industries, medicines, synthetic silk and semicotton textiles, products needed by hunters, costume jewelry, office equipment, foodstuffs "and so forth." Mongolia will export to the CSSR mainly copper and zinc concentrates, bulk fluoride, cashmere wool, goat, camel, horse and other hides and felts, as well as leatherwear. [Summary] [Bratislava PRAVDA in Slovak 3 Oct 84 p 6 AU]

CSO: 2400/42

NEW RESOLUTION OUTLINES COMBINE PLANNING, MANAGERIAL PROCESS

Vienna EUROPÄISCHE RUNDschau in German No 3, Summer 84 pp 95-109

[Article by Hans Schilar, Dr of Economics, Central Institute for Economics, Academy of Sciences of the GDR, and Gerhard Kraft, Central Institute for Economics, Academy of Sciences of the GDR: "Formation of Managerial, Planning and Incentive Processes in the GDR]

[Text] Throughout all its developmental periods the GDR, in its political, practical and theoretical economic activities, has always paid great attention to shaping and developing its planned economy, which is socially and economically based on state and cooperative socialist property. It has always been a matter of finding ways and solutions for changing and further developing the managerial and planning system in conformity with changing production and reproduction conditions. That was attested to in the past by the GDR's economic reform in the 1960's, which had to examine, after the socialist production relations were fully in place, which managerial and planning and incentive practices had to be done away with as they incorporated specific characteristics of the transition period from capitalism to socialism and which new requirements had to be implemented.

The measures combined within the scope of the "New Economic Planning and Management System," which were practiced with uneven success at that time, constituted the first complex attempt to adapt the economic mechanism to the needs of the all-inclusive construction of socialism in the GDR. Important experiences were gathered thereby, mainly the one teaching us that elevating the role of value parameters within the framework of economic auditing could affect economic efficiency positively only if these parameters became firmly embedded in planning, i.e., are themselves an expression of the planning. That is now being attested to by the "Measures for Improving Management, Planning and Economic Cost Accounting" that were taken in 1983 as they had become necessary after the forming of combines was concluded and are of overall economic importance.¹

A central concern of all efforts in developing the management and planning system has been and is making the principle of democratic centralism prevail, in conformity to any given conditions, which is always linked with a system of concrete relations between central state activities and activities under one's own autonomous responsibility. Experiences gathered in this area in the GDR, especially since the 1960's, indicate that this system of relations is most

effective when the management and planning structures fully take account of the objectively required socialization processes. So the search for further and new solutions for managerial structures was always tied to having to answer the question whether any given production and fund concentration and centralization processes conformed to the requirements for the development of the productive forces. Managerial structures that had by and large assumed their own autonomy as administrative organs and could not become economic management organs because there was no basis for it, such as the associations of state enterprises (VVB's), were thus logically replaced by other and more efficient solutions. As the formation of economic units that would conform to the requirements for the development of the productive forces and to the demands for an effectively functioning socialist economy was no short-term but, on the contrary, a long-term process in the GDR, it took quite a while for the new management structure to prevail. It became possible as well as necessary after the formation of the combines was concluded in the early 1980's.

The state-owned combines in industry and construction "constitute a new type of socialist production organization and management in the GDR economy. The distinguishing mark of these combines is that they combine under unified responsibility all that which by and large organically belongs together in the reproduction process."² That mainly comes down to a closer link between science and production. Largely working in independent facilities before the combines were formed, R&D personnel now are, by and large, working within combines with direct links to the reproduction process. The same is true of the 71,500 people working in special departments and enterprises in the combines' means of rationalization fabrication; they handle circa 23 percent of the investments in plant equipment.

"Forming the combines is not primarily a matter of changing the organizational structure but rather is an economically based concentration process, an economic merger of organically interconnected enterprises and facilities. The main idea behind forming combines is to close the reproduction cycle on the combine level."³ Combine management thus is responsible for all reproduction phases, from the strategic conceptual work via R&D, project planning and production, to sales and the market research and customer service that belong with sales. To do well in export and import, most combines have foreign trade enterprises or firms, under a twofold jurisdiction for the sake of the foreign trade monopoly. In principle, a combine can develop its own business to transact foreign trade business.

The combine formation started in 1966/67. In centrally managed industry and construction it led to 153 combines, in the Bezirk-managed industry and construction, to 124. Unified management structure comes with it. The centrally managed combines come under the 11 industrial ministries and the construction ministry, the Bezirk managed combines, under the Bezirk economic councils and the Ministry for District Managed Industry & Foodstuffs Industry. So it became possible to draw up national economic plans by ministries and combines.

The combines get binding official plan quotas and are working according to economic cost accounting. The enterprises belonging to the combine are economically and juridically autonomous, i.e., they also work within the scope of the state plan applying to them and in accordance with economic cost accounting. Such economically and juridically autonomous combine enterprises are a significant characteristic of GDR combines.

Of decisive importance for the combine to function effectively as a large economic unit is a rational internal combine management. As conditions differ in combines, three different managerial forms have now evolved: combine management by a parent enterprise, by an autonomous combine management, and by a management enterprise. Combine management by the parent enterprise has been found to be the most effective form from the outset as the identity between combine management and the management of the parent enterprise (the general director of the combine also is the director of the parent enterprise) holds managerial and administrative expenditures down. The guideline was issued to create for this form of management the "prerequisites, step by step, where today certain transitional solutions are still being practiced."⁴

Results in the GDR's Economic Development, 1970-1984

Based on the systematically increased number of combines, the chief pillar of modern economic management, in the 1970's, the GDR economy has shown impressive growth rates. The average annual rate of growth in the produced national income since 1970 has been 4.6 percent. This trend has continued through the first quarter of 1984. And here we achieved it for the first time in GDR history to reverse the tendency of the faster growth in production consumption as compared with the produced national income. The latter rose while the use of energy sources, raw materials and semifabricates dropped in absolute figures. Such savings increasingly become an expression of the transition the GDR economy is making to the resources-saving way of growth, characterized by a high technological and products upgrading.

Induced by internal and external reproduction requirements and givens, the GDR has since the early 1970's purposefully been pursuing the economic policy of converting from mainly extensive to mainly intensive economic growth. The Eighth SED Congress in 1971 assigned intensification as the chief route for enforcing our economic and social policy, and that was corroborated and expanded further by the Ninth SED Congress in 1976.

Table 1: Average Annual Growth Rates for Chief Economic Parameters in the GDR (by percent), based on 1980 Prices

	NP	GP	BP	$\frac{NP}{BP}$	$\frac{NP}{GP}$
1970-75	5.4	5.9	0.1	5.2	-0.4
1975-80	4.1	5.7	0.4	3.7	-1.4
1981	4.8	5.7	0.6	4.6	-0.9
1982*	2.5	5.0	0.6	2.2	-2.3
NP	Produced National Income				
GP	Basic Assets in Producing Sectors				
BP	People Working in Producing Sectors				
NP/BP	National Income per Workers in Producing Sectors (social labor productivity) Net productivity (p^N)				
NP/GP	National Income per M 1,000 of Basic Assets in Producing Sectors (Net Basic Assets Quota)				
*	Provisional Data				

Source: Computed from "Statistisches Jahrbuch der DDR," Berlin, 1983, pp 13, 15, 17.

Analyzing the overall economic situation and the experiences of the 1970's, the 10th SED Congress in 1981 decided to continue the economic and social policy based on an economic strategy geared to the conditions of the 1980's that envisages the potentials and opportunities of the GDR and of CEMA.⁵ Economic success in the GDR made possible further noticeable improvements in the citizens' working and living conditions. That was demonstrated by income growth and the continued planned implementation of the housing construction program, the centerpiece of the SED's social policy.

The core of the economic strategy is the acceleration of scientific-technical progress and its economic utilization and a decisive improvement of the cost/benefit ratio in all production sectors and branches. A focus on microelectronics, robot technology, electronic controls and computer techniques, modern refinement chemistry, biotechnology and others, with a comprehensive utilization and maximum refining of domestic resources, mainly of soft coal, conforms to national conditions also because the GDR, through its educational policy, possesses a great intellectual and qualification potential. The continued implementation of the economic strategy therefore will decisively depend on how well and how fast one can cope with the innovator processes in the main directions of scientific-technical progress referred to and achieve higher efficiency, which would also crystallize on foreign market in higher income.

When talking of basic tasks in the economic strategy, one must underscore at equal measure the roles of foreign trade and of socialist economic integration. As before, the GDR relies on the stable foundation of close cooperation with the Soviet Union and the other CEMA countries. The fact that circa 70 percent of our foreign trade is transacted with the CEMA countries by itself demonstrates the high degree of linkage between the GDR's and the CEMA countries' economies. And much of that trade is based on production specialization and cooperation agreements.

In economic and scientific-technical relations with the developing countries, the GDR focuses on combining export/import with scientific-technical cooperation, cadre training, advisory activity and customer service. It seeks a further development of commercial and economic relations with capitalist industrial countries under the terms of equality and mutual advantage.

Table 2: Development of Labor Income and Available Real Income of Workers and Employees, 1970-1982

	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Average monthly working income of workers and employees in the socialist economy, in marks	755	889	1021	1046	1066
Available real income by workers' and employees' households in the GDR, in marks	1326	1738	2117	2207	2282

Source: "Statistisches Jahrbuch der DDR," Berlin, 1983, pp 50, 272; Berlin, 1982, p 266. --Average size of households: 1970: 2.97; 1975: 3.02; 1980: 2.91; 1981: 2.91; 1982: 2.89.

Trends and Effects in the Handling of Management, Planning and Economic Incentives in the 1970's

When the forming of the combines had been concluded which turned the combines into basic economic units, it became possible and necessary further to improve the management, planning and economic cost accounting system. This essentially amounts to a further development of the socialist planned economy in the GDR geared to the requirements and criteria of economic growth oriented to qualitative and intensive factors. The need for further developing the entire economic mechanism had become more perceptible already in the 1970's, in line with implementing an economic policy that was aimed at intensification processes.

A number of measures were initiated therefore between 1971 and 1975 that were aimed at strengthening the planning, balancing and unity of material and financial planning within the scope of economic cost accounting. That included in particular setting up a planning order for preparing national economic plans in effect for 5 years;⁶ improving the balancing system, planning for consumer goods and the finance planning; new regulations for setting up and using industrial bonus funds; the setting up of a performance fund as incentive for plan overfulfilment for selected state tasks and so forth.

Typical mainly of the second half of the 1970's are measures aimed at performance rating and price formation.⁷ Enforcing criteria and measures for passing economic judgments on economic accomplishments in the combines and enterprises became a central practical and theoretical issue--not last for reasons of having to carry out permanently performance comparisons among the economic units. It soon became apparent that the parameter of "industrial commodity production" could not live up to this function in terms of economic intensification. Needed advances toward exercising more pressure on cost reductions and quality improvements were made by supplementing that parameter by two others, "net production" and "basic material costs per M 100 of commodity production,"⁸ with still another one, "export," being added later. The disadvantages of the parameter of "commodity production" which was mainly oriented to quantitative growth could, however, not be fully eliminated by setting up and using a system of parameters.

Table 3: Trend in Selected Sectors of Social Policy

	1970	1975	1980	1981	1982
Newly built apartments	65,786	95,976	120,206	125,731	122,417
Modernized apartments	10,302	44,817	49,017	59,619	64,636
Child-nursery assignments	183,412	242,553	289,550	301,434	314,554
Allocations for the population from public funds for price stabilizations for necessities, public tariffs and the housing economy and for holding rentals down, in million marks	10,654*	14,875	23,902	28,472	30,288
--in terms of percentage of produced national income	8.7*	9.7	12.8	14.5	15.1

*=1971

Source: "Statistisches Jahrbuch der DDR," Berlin, 1983, pp 13, 51, 166, 336.

Innovation processes, growing in importance within the scope of intensification, demanded solutions for setting prices, particularly for new and further developed products. It was indicated that such products had to be economically evaluated with reference to the social labor effort behind them and their intrinsic use-value. Use-value improvement in terms of the cost/benefit ratio,⁹ the price setting regulation for new and further developed products in the production goods economy, and the effort of labor give us a price-setting factor for price ceilings. Proceeding from there, the real price is set, derived from the use-value growth as divided up between the producer and the user.

Through the price setting along the cost/benefit ratio, advances became apparent in providing scientific-technical progress with incentives. The use of this price setting method also revealed problems relative to measuring the use-value, the dividing up of the benefits, and the conformity with performance rating. Theoretical debates in the GDR dealt with the role of the use-value in the price setting process, and it was brought out that innovation processes must take more account of the use-value in the overall economic rating process.¹⁰

Table 4: GDR Foreign Trade, 1970-1982 (million valuta mark)

<u>Year</u>	<u>Total</u>	Socialist Countries of which		Developing Countries	Capitalist Industrial Countries
		<u>Total</u>	<u>USSR</u>		
1970	39,597	28,340	15,485	1,601	9,656
1975	74,394	51,845	26,539	3,254	19,295
1980	120,101	79,810	42,609	7,331	32,960
1981	132,927	88,544	49,888	6,542	37,841
1982	145,109	95,835	55,164	8,430	40,845

Table 5: GDR Foreign Trade Products Structure, 1970-1982

	Proportion in percent of total volume of			
	Export		Import	
	<u>1970</u>	<u>1982</u>	<u>1970</u>	<u>1982</u>
Machinery, equipment, transport vehicles	51.7	48.5	34.2	32.3
Fuels, mineral raw materials, metals	10.1	18.5	27.6	39.9
Other raw materials, semifabricates	7.4	6.9	28.1	16.3
Industrial consumer goods	20.2	14.2	4.5	4.1
Chemical commodities, fertilizers, caoutchouc, construction materials and other goods	10.6	11.9	5.6	7.4
Totals	100.0	100.0	100.0	100.0

Source: "Statistisches Jahrbuch der DDR" Berlin, pp 235-236.

**Measures for Improving Management, Planning and Economic Cost Accounting
(February 1983 Resolution)**

Having become possible, through the streamlined management structure created, and having become necessary because of the intensification requirements due to changed reproduction conditions in the 1980's, further measures for improving management, planning and economic cost accounting were issued in February 1983. They amount to modifications and further developments of all crucial elements and components of the economic mechanism and thus, compared with a number of important partial solutions in the 1970's, constitute a concept of holistic and, hence, complex solutions. The measures apply to the following sectors: (1) Management; (2) Planning and balancing; (3) Performance rating of combines and enterprises; and (4) Economic cost accounting.

As to the first: More expert management on all economic levels is a central concern that aims at awakening the working people's creativeness for a high performance growth and at making the management process more effective by means of sound scientific decisions. An important prerequisite for that lies in rigorously enforcing the principle of one-man management based on the now clearly delineated guidelines from the minister to the general directors of the combines and from them, to the enterprise directors, foremen and working people in the combine enterprises. The greater responsibility the combines have assumed in the economic reproduction process and the broadening of their sphere of activity at the same time require a higher degree of state controls.

The second: More expert state and combine planning addresses to a large extent improvements in working out balances.¹¹ The dynamics in scientific-technical progress and the conditions for doing well on markets call for greater planning and balancing flexibility adapted to such dynamics. To be able to react faster to such changing conditions and demands, the following measures were initiated: (a) Improving operations planning and balancing by more effectively using available reserves in resources and capacities; (b) enforcing greater flexibility in shaping and implementing economic contracts through shortening order and delivery deadlines significantly; and (c) a more rapid submission and application of norms and standards for energy and material consumption, representing the current stage of scientific-technical development.

The third: Decisive changes relate to establishing performance ratings for combines and enterprises. The previous system of parameters, "industrial commodity production," "net production," "basic material costs per M 100 in commodity production," and "export," is replaced by a different system of parameters, "net production," "profit," "products and services for the population," and "export." By removing from the performance rating the "commodity production" parameter, the importance of which is thereby not slighted in terms of economic planning and as a planning parameter, and by incorporating in performance rating, above all, the "profit" parameter, a decisive step is taken to conform to the changed growth and reproduction conditions in the GDR economy, which means to say, to set the best possible incentives for high-grade production at the lowest costs. By the "products and services for the population" parameter one intends to improve greatly supplies in high-grade and wanted consumer goods. The importance within the scope of the performance rating of the "export" parameter clearly follows from the GDR's foreign economy intensity, reflected in that circa 40 percent of the national income is affected through export and import.

The fourth: Extensive new regulations are being initiated in economic cost accounting, the role of which grows considerably at intensive economic growth and at high dynamics in production. Since economic cost accounting came into effect with the first Five-Year-Plan of the GDR in 1951, its content and range of application have been steadily refined and further developed. The current measures mainly aim at improving the unity between material and value-related financial planning to achieve a synchronous and more efficient functioning of the law of a planned proportional development and of the value law, directed at resources-saving and qualitative growth.

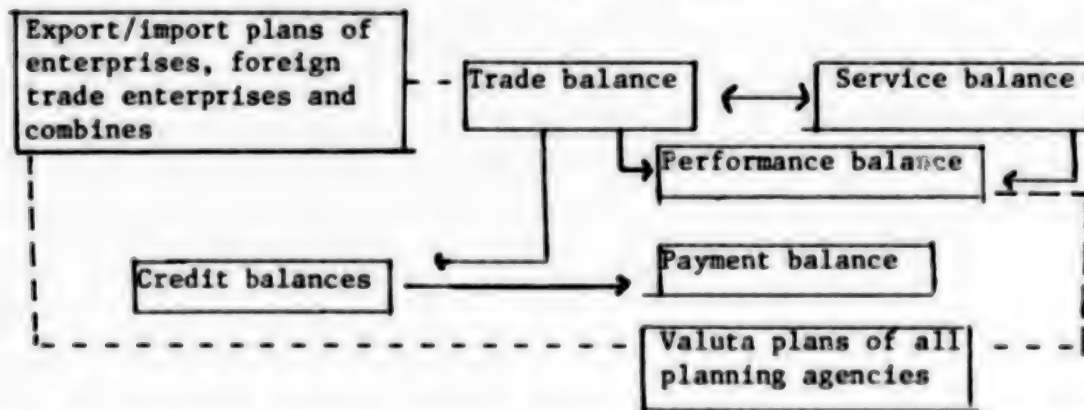
In particular, among others, the following changes are involved: (a) Reinforcing cost planning by improving its conformity with resources utilization and the balance shares; (b) further aligning industrial prices with economic allocations. A contribution for public funds goes into effect as part of the prime costs. That puts a higher value on live labor for the economic importance it has and provides incentives for an efficient utilization of the public labor capacity. Relative to actually spent wages, now the combines have to submit, uniformly, 70 percent of it monthly to the state budget.¹² Together with introducing a contribution for public funds, which in the GDR in 1982 came to not quite one third of the produced national income, industrial prices are trimmed to reduce excessive lucrativity rates. That curtails the profit evaluation and creates more favorable conditions for cost reduction; (c) the effectiveness of the production fund dues is raised in that in addition to the prevailing normative of 6 percent more fund dues become required when investment deadlines fail to be observed, when volumes set down in the currency plan are exceeded or when the time utilization normatives for equipment fail to be observed, of another 6 percent each;¹³ (d) for R&D products, costs and price ceilings are worked out that have to be officially confirmed and anchored in the tasking workbook¹⁴ that contains the R&D tasks for technological and product upgrading.¹⁵ Proceeding from the positive experiences with the cost/benefit ratio, cost and price ceilings are based on world standard requirements and on the foreseeable development of output and sales. The criteria for this are high export revenue chances, improving the input/output ratio, trimming the production expenditures and the specific material and energy consumption, and high use properties; (e) further increases for profits and prices for high-grade products, efficiency and attractiveness, and discounts for outdated products; (f) the new rules furthermore provide for: 1. that the achievements in one's own fabrication of rationalization means and in modernizing basic assets no longer are computed separately, but within the framework of the combine's overall performance; 2. that economic cost accounting is fully applied to scientific-technical work, i.e., the cost/benefit ratio also is applied in this sector and the outcome of such work is to be sold just as any other production achievements are;¹⁶ 3. that the performance principle is more strongly enforced in industrial research through effective material and moral incentive procedures; and (g) an agrarian price reform is carried out, coordinated with the industrial price changes referred to and in conformity with overall public requirements. That reorganizes the economic relations between agriculture and industry and all other sectors. The main feature in the agrarian price reform lies in abolishing price supports for means of production agriculture gets from industry. Those products agriculture now has to pay for at current industrial prices. Agrarian prices for crop and livestock products are also being raised in a differentiated manner and the dues for inequitable soil qualities (differential rates) and the profit economy are under new rules. Connected with that are price regulations that are meant to encourage the individual production of crop and livestock products.

Combines and Foreign Trade

Being the most important part of the economic reproduction process, foreign trade is of great importance for further improving economic efficiency. Through setting up the industrial combines, the state's foreign trade monopoly was further perfected and adapted to the new conditions. Now the foreign trade enterprises are under their relevant combine or industrial ministry as well as under the foreign trade ministry. This way are combined the experiences and insights of the export commodity producers with those of the foreign trade enterprises and the organs under which they are on behalf of higher efficiency in foreign trade activity and for the sake of foreign policy requirements. This joint responsibility arises as early as when the plan is being prepared.

The material proportionality of the national economic plan is provided by using material, equipment and consumer goods balances. They are the main instruments for establishing the commodity structure of output, according to plan, and of foreign trade. Among the central balances used for foreign trade management and planning are: the trade balance, the service balance, the credit supply and the credit fluctuation balance, and the payment balance. These balances, worked out by the State Planning Commission at high aggregation and by the foreign trade ministry in a detailed breakdown, are closely linked to the export/import plans in the enterprises. This process of plan preparation makes transparent the relations between central state planning and the activity of the combines, which elucidate how much external and internal economic relations--due to exports and imports--depend on each other.

The following diagram shows how foreign trade balances and plans work together:



- - - - = Relations between central state planning and combines and enterprises
 ——— = Direct connection among central foreign trade balances

On behalf of keeping material balances intact for the system in its entirety it is indispensable "to link the interests of the combines, enterprises and individual collectives ever more compellingly with public requirements, that is to say, to focus them on highly efficient economic management."¹⁷ Economic cost accounting as applied within the scope of combines and enterprises cannot adequately reflect the potentials for the foreign economy that are inherent in the intertwining economic relationships. Cross-sectional management--as expressed, e.g., in the balancing system--linked with economic cost accounting therefore is

in the interest of the economy and of further improving management and planning. Through new state audit regulations in the fields of investment (e.g. on behalf of encouraging export production), material balancing, the energy economy, quality warranties and others, the cross-sectional management to ensure the complexity of economic development is now also in place in the enterprises and combines. "For further increasing forms of decision-making by cross-sectional management, we may refer to the (. . .) duty of the managers in the balancing organs and those commissioned with balancing to make operational decisions in the interests of having balances adapt flexibly to market requirements and to the economic needs in the course¹⁸ of plan implementation."¹⁹

Improving the efficiency in foreign trade activity holds central place in the attempt to improve foreign trade management and planning. To ascertain the effects and merchandise balances in valuta mark on the national income available domestically, all export and import goods are valued in marks at domestic prices. The ratio between export revenue in valuta mark and the domestically required payments to export enterprises in mark reveals a great deal about the effectiveness of export relations by means of the parameter:

Foreign currency parameter of the exports =
$$\frac{\text{Export revenue in VM}}{\text{Export costs in marks}}$$

As the foreign currency cost parameter for imports defines certain efficiency conditions for foreign trade,²⁰ the ratio between import costs at foreign prices in valuta mark and the domestic revenue from selling import goods at domestic prices, in marks, is shown by the parameter:

Foreign currency cost parameter for imports =
$$\frac{\text{Import costs in VM}}{\text{Import revenue in marks}}$$

New rules are focusing on steadily raising foreign trade profitability. That concerns:

--The combines' obligation to develop further and produce marketable, salable and profitable export commodities of a high scientific-technical level and to make the most economical use of imports.²¹

--Uniform export reporting by the production enterprises and foreign trade reporting by the foreign trade enterprises, and the combines' obligation to figure out the effectiveness of export.²²

For combines and enterprises and industrial sectors, through a factor analysis of export profitability, as called for by the 1981-1985 planning order, the chief causes are determined for changes in profitability from one plan year to the next. The data available also can more effectively still bring to realization the identity of interests on the various management levels. That, moreover, also creates premises for reacting more flexibly to external economic conditions and opportunities through the time horizon provided by the national economic plan.

Profits are the decisive source for financing simple and extended reproduction and setting up funds for material incentives in the enterprises and combines. They are tantamount to overall enterprise income. For the overall enterprise income the combines have to show: domestic and other income, export income, and the income of the foreign trade enterprises assigned to the combines.

Among the objectives the combines pursues by means of the information from the tasking workbooks is to project the likely valuta revenue.²³ Additions to the valuta fund of the combines and enterprises depend of course on meeting the state planning tasks for export profitability.²⁴

Except for some of the rules mentioned under points 4 and 5, which already went into effect in 1983, the whole system of measures takes effect comprehensively as of January 1984. We have not been able, therefore, to learn sufficiently how all these new regulations will function. Initial experiences are telling us that the speed-up in intensification in the GDR since 1983 and the economic successes resulting from it are due, not only to a slight extent, to the measures referred to and the new regulations having taken effect.

Review and Preview

Forming and shaping a functional economic mechanism in line with the requirements of the socialist production relations and the development of modern productive forces is a complicated process in constant development which includes entering virgin territory and also abandoning impassable ways and inefficient solutions. The nearly 40-year old antifascist-democratic and socialist construction of the GDR demonstrates that the socialist planned economy is possible only on the basis of democratic centralism and its steady further development. As the experiences in the developed socialist countries tell us, along with general requirements there are also national conditions and historic developmental processes that affect the concrete implementation of that principle. Differences arising from that show ample variables that must be carefully studied and analyzed; by no means do all differences possess the potential of being generalized in terms of being carried over to other economies.

Very relevant for the theory and practice of the socialist economy are the problems that relate to what are called plan-value categories. They are gaining increasing importance under the conditions of the transition by the socialist economy to the course of primarily intensive, and that means qualitative, growth. That is seen, among other things, by the fact that the "net production" and "profit" parameters are value parameters, so that performance rating, consequently, functions as well or as poorly as industrial prices reveal, again well or less well, the publicly necessary labor expenditures and, thus, the real cost relations. We must now and in the future therefore pay special attention to the pricing efforts, mainly to the setting of enterprise prices and industrial wholesale prices. It remains an irrevocable principle that the socialist price is a planned price, embodies an essential aspect of planning, and on that basis helps secure the synchronism between the material-substantive and the value-related and financial cycles.

FOOTNOTES

1. Cf. G. Mittag, "Theoretische Verallgemeinerung der Erfahrungen der Entwicklung der Kombinate fuer die Leistungssteigerung in der Volkswirtschaft, insbesondere bei der Nutzung der qualitativen Faktoren des Wachstums" [Theoretical Generalization of the Experiences in the Development of the Combines for Economic Performance Improvements, Especially by Using the Qualitative Growth Factors] (Speech at the Economic Sciences Conference of the GDR, 29-30 September 1983), Dietz publishing house, Berlin, 1983, pp 48-60.

2. Ibid., p 44.
3. Cf. G. Friedrich, "Management and Planning in Combines and Enterprises--Experiences and Generalizations," WIRTSCHAFTSWISSENSCHAFT, No 7, 1980, p 771.
4. Cf. G. Mittag, op. cit., p 45.
5. Cf. Erich Honecker, "Bericht des ZK der SED an den X. Parteitag der SED" [SED Central Committee Report to the 10th SED Congress], Dietz publishing house, Berlin, 1981, pp 48-60.
6. Cf. "Order on the Order of Economic Planning in the GDR, 22 October 1974," "Gesetzblatt der DDR" [GDR legal gazette], separate issue No 775a; "Order on the Skeleton Guideline for Industrial and Construction Enterprises and Combines, 28 November 1974," ibid., separate issue No 780.
7. Cf. "Resolution on Setting Industrial Prices in Implementation of the Resolution on Performance Rating of the Enterprises and Combines, 10 June 1976," ibid., Part I No 24, 13 July 1976.
8. As of 1 March 1980.
9. Cf. "Resolution on Setting Industrial Prices . . .," op. cit.; "Order on the Central State Calculation Guideline for Setting Industrial Prices, 10 June 1976," "Gesetzblatt der DDR" Part I, No 24, 1976, p 317.
10. Cf. Th. Banse/H. Nick, "Use Value and Price Formation," WIRTSCHAFTSWISSENSCHAFT, No 6, 1975, pp 843-851; J. Boesche/F. Matho, "Encouraging Scientific-technical Progress through Prices," ibid., No 9, 1977, pp 1324-1340; H. Mann, "The Interrelation between Value and Use-Value and its Deliberate Utilization by Means of Setting Prices According to Plan," ibid., No 1, 1978, pp 15-27; P. Elz, "Theoretical Problems in the Connection between Value, Use-Value and Price," ibid., No 6, 1979, pp 655-664.
11. "Order on Supplementing the Order of Economic Planning in the GDR, 1981-1985," "Gesetzblatt der DDR," separate issue No 1122, 15 April 1983.
12. Cf. "Decree on the Contribution for Public Funds," ibid., Part I No 11, 4 May 1983, pp 105-106.
13. "Decree on Production Fund Dues," ibid., pp 106-110.
14. Cf. "Tasking Workbook Decree. First Implementing Regulation on the Tasking Workbook Decree for R&D Tasks," "Gesetzblatt der DDR," Part I No 36, 22 December 1983, pp 381-386.
15. Cf. "Order No Pr 475 on Cost and Price Ceilings," ibid., Part I No 12, 13 May 1983, pp 131-139.
16. Cf. "Order on Using Economic Cost Accounting in R&D," ibid., Part I No 36, 22 December 1983, pp 387-395.

17. E. Honecker, "Marx in unserer Zeit—der Kampf um Frieden und sozialen Fortschritt" [Marx in Our Time—The Struggle for Peace and Social Progress] (Speech and Concluding Speech at the International Science Conference), Berlin, 1983, p 23.
18. Cf. "Balancing Order, 2 June 1983," "Gesetzblatt der DDR" Part I No 15, pp 161-164.
19. S. Loerler, "Legal Aspects in the Perfecting of Economic Management," STAAT UND RECHT, No 1, 1984, p 22.
20. Cf. "Order on the Order of Economic Planning in the GDR, 1981-1985, 28 November 1979," "Gesetzblatt der DDR," separate issue Part 0.
21. "Decree on the State-Owned Combines, Combine Enterprises and State-Owned Enterprises," "Gesetzblatt der DDR," 13 November 1979, Part I No 38, p 359.
22. Cf. "Decree on Further Perfecting Economic Cost Accounting Based on the Plan," "Gesetzblatt der DDR," 5 February 1982, Part I No 3, p 91.
23. Cf. "First Implementing Regulation for the Decree on Tasking Workbooks for R&D Tasks," "Gesetzblatt der DDR," 22 December 1983, Part I No 36.
24. Cf. "Decree on Further Perfecting . . .," op. cit., p 91.

5885

CSO: 2300/9

NEW AGRICULTURAL EQUIPMENT-ASSEMBLY TILLS SOIL EFFICIENTLY

East Berlin BAUERN-ECHO in German 12 Sep 84 p 6

[Article by Dr O. Busse and Dr W.-D. Kalk of the Research Center for Soil Fertility, Muencheberg: "New Combinations of Agricultural Implements Used in Seedbed Preparation"]

[Text] Information on Soil Preparation during Fall Tilling

The delay of the harvest due to weather conditions will result in intensified efforts in the next several weeks to prepare the soil for the scheduled sowing of quality winter catch crops and winter grain. The most important objectives of the soil preparation brigades are high seedbed quality, a requirement for optimum yield, and minimum diesel fuel consumption. One way to economize during soil preparation for fall planting while at the same time achieving a high yield is to condition the seedbed while it is being furrowed. The use of a plow/seedbed preparation implement combination is advantageous for the following reasons:

- The seedbed preparation implements used for breaking, leveling and compacting the soil yield optimum results in freshly plowed soil while at the same time reducing expenditure.
- Drying of the plowed soil is reduced by immediate pulverizing and leveling.
- Rolling resistance and slippage of tractors used in subsequent operations is lowered, thus reducing energy loss.
- Reduction or elimination of separate passes otherwise needed for seedbed preparation reduces the number of ruts in the seedbed which impede plant growth.

Series Manufacture of the B 603 Started

Plant production enterprises which have been able to use the K-700 or the K-700 A in conjunction with the B 550 plow and the B 601 seedbed preparation implement have achieved good results in terms of seedbed quality in past years. The quality of the furrow is much better than that produced by combinations of plow and rollers, floats or harrows. This saves at least one

pass in the preparation of the seedbed. Sandy soil is normally ready for planting after it has been prepared by the B 601 in combination with wheel-type rollers and spike-tooth or disc harrows with star-type blades. Fine cultivators and harrows or simple harrow/float combinations should only be used to level the final furrows before sowing starts. Simple conversion and transport of the B 601 in conjunction with the B 550 yield technological advantages.

In the past, the effects on hard-to-work loamy and clayey soil were not satisfactory. For this reason, rollers and spike-tooth harrows underwent further development, resulting in disc-type rollers, well suited for use in hard-to-work soil, and angled spike-tooth harrows which were suitable for all types of soil. Disc-type rollers break and compact the soil better than wheel-type rollers, and angled spike-tooth harrows are less subject to clogging than their predecessors, harrows utilizing pipes and flat bars. Angled spike-tooth harrows also resist jamming by rocks and hard clods. Because the manufacturer allows the plant production enterprises to select suitable tools for the type of soil in question when purchasing the B 601 seedbed preparation implement as well as during subsequent conversion, we would like to present information gained from a number of years of research on the most effective implement combinations for different locations in the GDR. These recommendations also apply to B 602 equipment used in combination with plows of type 6 PHX 35.

Seed furrows on most of the farmland in the GDR are made using ZT 300 or ZT 303 tractors. The advantageous results of combined seedbed preparation can therefore not be fully realized, because a seedbed preparation implement compatible with the B 601 for use with B 200 and B 201 plows has not been available. The B 459 post-preparation implement does not meet the requirements of seedbed preparation while the seedbed is being furrowed. Pulverizing and compacting performance is not sufficient, particularly when used in hard-to-work soil. These implements are extremely susceptible to malfunction due to their breakable cast rollers and partial clogging of their attached tools which cannot be withdrawn from the soil at the headland. The B 459 requires a high degree of maintenance.

The state enterprise LMB Doebeln began series production of the new B 603 seedbed preparation implement this year (see photo). The implement has four tool shafts; the angled spike-tooth harrows and disc harrows with star-type blades which were used effectively on the B 601 are available for the B 603, as are wheel-type rollers (for sandy soil) and disc-type rollers (for loamy and clayey soil).

Better Adaptation to the Type of Soil

The B 603 has a hydraulically actuated pivoting axle so that it can be withdrawn at the headland. The axle is designed such that the wheels are lifted while the soil is being worked (rut-free seedbed). During transport over the road, the center of gravity is located ahead of the axle (positive load imposed on the plow), and behind the axle when turning to allow support of the implement on the wheels and the trailing tool. A special coupling used to

connect the implement to the plow enables the equipment to be moved from the transport position to the working position without having to be disconnected. Because the ZT 300/303 uses both 4- and 5-bottom plows for seed furrowing, depending upon ground resistance, the seedbed preparation implement is available in widths of 1.60 and 1.95 m.

The B 603 offers the following improvements over the B 459:

- improved working quality and technological suitability through use of better tool combinations, discontinued use of cast rollers and higher tool loadability;
- tools are adaptable to soil type and prevailing conditions;
- can be withdrawn at the headland, thus greatly reducing tool damage and clogging;
- less prone to clogging--clogs can be quickly removed by briefly raising the implement hydraulically during working;
- savings of material by replacing the breakable cast rollers and reduction of repair costs.

Use of the B 603 with the correct complement of tools increases availability of the plow/seedbed preparation implement combination for seed furrowing with the 20 kW tractors. High-quality plow/seedbed preparation implement combinations are now available to the plant production enterprises for use with all tractors used for seed furrowing.

12644

CSO: 2300/23

LAND RECLAMATION INITIATED IN STRIP-MINING REGIONS

Lakes Created From Quarries

East Berlin DER MORGEN in German 8 Aug 84 p 3

[Interview with Doris Werner, Borna Kreis Council Member]

[Text] Borna and brown coal have been together for more than 180 years. Coal, energy and chemical products have made the area round this kreis city vitally important for our land. However, the environmental stress to which it is subjected is considerable. One can "smell" the importance of this region at every turn.

It is therefore all the more important that, wherever possible, the "coal people" who live and work there find relaxation and recuperation. On the gigantic crater landscapes of the open-pit mining areas, wheat must blossom forth again, forests must grow again, and waters must once more invite people to swim. To accomplish this, there exist long-term plans which extend up to the year 2,000. Towards this end much has been and will be done by our state. We have discussed this subject with Doris Werner, member of the Borna Kreis council for environmental protection, water management, and recreational affairs.

The council member said the following: "In our region it was the socialist state which was the first to occupy itself with environmental and landscape protection in view of these industry-related stress situations. Before the war there existed no plans for the shaping of the strip-mining areas after the coal had been mined.

Doris Werner went on to say that "we must proceed from the fact that each year our open-pit mines affect new land and that we are one of the most forest-poor districts in the republic. This means that we, the council, must jointly with combines, enterprises, citizens, and all social forces, including the very effective Society for Nature and Environment within the Cultural League, do everything possible to reclaim lost areas and to preserve existing forests, parks, ponds, bathing beaches, and scenic landscape areas."

In this connection, great importance is accorded to the inter-enterprise re-cultivation arrangements specifically made for the purpose of reclaiming strip-mined land. Reclaimed areas are utilized primarily for agriculture as well as for forestry and recreation of the people, which is an inseparable element thereof.

A visible example in this respect is the closely situated recreational area near Parna--a remaining open-pit mining hole which, to be sure, belongs to Altenburg Kreis, but which is also the destination of many inhabitants of Borna Kreis. Not only do they have woodlands there again, but also a bathing beach, a camping site, an inn, and approximately 700 bungalows. Have your vacation at the edge of the brown-coal area!

A few kilometers from the gates of Borna, a former open-pit mine also became filled with water. And already the first bathing guests have arrived. Doris Werner explains: "This 'Borna Basin' has several purposes. As is the case with other residual holes, it serves flood control, fresh-water fishing (trout are bred in nets), as a water reserve for agriculture, and it is becoming a recreation center for approximately 8,000 people." Here, by 1986, two bathing beaches with mobile provisioning and sanitary installations will come into being. It is expected that later on approximately 8,000 people per day will find relaxation there.

Concrete plans also exist for the Borna-East open-pit mining area, in which coal mining has in the meantime also taken place in Geithain Kreis. In the Nenkersdorf residual hole, which belongs to it, the water inflow is to begin in 1987 and then here, at F-95, there is to be created by the beginning of the 1990s, a region having all the amenities pertaining to recreation.

"From a strip-mining area to a recreational area--that constitutes a gigantic program which is financially and materially expensive for our state," Doris Warner tells us, and identifies for us the presently largest planned project the importance of which extends far beyond Borna's borders: it is the transformation of the Haselbach open-pit mine into an excursion and vacation center for approximately 15,000 people from the Borna, Altenburg, and Schmoelln kreise reaching as far as Leipzig. Plans and drawings are ready and available for 300 hectares of water surface, two camping sites, a bathing beach and a bungalow settlement for enterprise employees, possibilities for water sports (except with motor boats), forest and hiking paths, inns, and vending booths.

This is a tremendous project. But everything possible is also being done on a smaller scale in order to make the environment in the area around Borna more pleasant. Thus it has been decided this year to create woodlands covering an area of 5 to 6 kilometers annually. In addition, there are presently growing on approximately 300 hectares new forests, in which connection especially smoke-resistant trees are being planted, such as Scotch pines, beech trees, oaks, poplars, and birch trees.

On an area of approximately 300 hectares, there are in Borna Kreis garden plots of the Union of Small Gardeners, Settlers, and Small Livestock Raisers. Seventeen of their fields of endeavor are officially recognized recreational areas.

In addition to the residual strip-mining holes which are being developed into bathing beaches, the five outdoor swimming pools in Borna Kreis, four of which came into being in 35 years of existence of the GDR, are of not inconsiderable importance for recreation and relaxation. Such swimming pools exist in Borna itself, in Pegau (initiated on the occasion of the 15th birthday of the GDR),

Regis-Breitingen, Neukieritzsch, and Boehlen. At the beginning of the vacation season, the reconstructed swimming pool in Pegau was reopened.

The chemical workers of Boehlen have what is today the most attractive swimming installation. It was built as early as before the war. This open-air swimming installation was reconstructed. It was outfitted with water circulation and heating equipment. The water is heated to a temperature level of 28 degrees. This is made possible by hot water not used in the summertime by the VEB "Otto Grotewohl" in Boehlen, an enterprise of the Schwedt gas combine. This is one example of the various uses of reserves of the large enterprises for cooperation with local installations by way of territorial rationalization. It begins on a large scale with the reclamation of mining dumps and extends down to the supposedly small outdoor swimming installation in Bohlen, where in good weather conditions approximately 4,000 people amuse themselves daily.

Agricultural Land Restored

East Berlin NEUES DEUTSCHLAND in German 2 Aug 84 p 3

[Article by Dr Harri Bernstein, Deputy Minister for Coal and Energy]

[Text] While relaxing on the shore of Lake Senftenberg, or wandering about the hilly woodlands around Aschenberg mountain in Rositz, or enjoying the view of the fertile fields in Cottbus Bezirk, one scarcely thinks about the fact that at one time open-pit mines characterized the appearance of the landscape and large-scale digging equipment mined brown coal from the ground. But this is actually the case. In the GDR, 2,000 to 3,000 hectares are claimed annually for opening up brown-coal mines. At the same time great efforts are being expended for reclaiming formerly mined areas. Thus, it has been possible since 1965 to return to the population 40,728 hectares of land for agricultural and forestry uses or as recreational areas. This amounts to 87 percent of the areas taken away in this time period.

Thus far, more than 2,000 hectares of woodlands have been reforested in former strip-mining areas for agricultural and forestry-related utilization as well as for recreational purposes. Each hectare of land is valuable. The reclamation brigades, which in the open-pit mining areas prepare all technologically no longer needed surfaces for their further utilization, do not simply just return the land, but they always want to ensure the best possible soil quality for the agricultural production cooperatives. Thus, these brigades have in VEB "Erich Weinert" brown coal mine in Deuben returned to the Auligk agricultural producer cooperative 350 hectares of usable land. On 200 hectares of this land alone, the yield rose from 12.4 dt [tenth of a metric ton] of grain units per hectare in 1979 to 49.4 dt in 1983.

Irrigation with drain water from coking installations resulted in the fact that on the area reclaimed by the brigades of the Spreetal-Kleinleipisch open-pit mining area there are today being achieved higher yields than before the opening up of the strip-mining field.

This shows that the seemingly contradictory interests of raw-material production and agricultural and forestry-related utilization of the soil can be reduced to a common denominator in the socialist planned economy with the close cooperation of all those involved. And already at the stage when the geologists explore the presence of raw material deposits, they do not think merely of coal, but also of what will happen to the landscape subsequently. The first discussions concerning the later shaping of the landscape are held already at the time when it is being determined in which territory and from which deposit sites coal is to be mined. For the reclamation of the Breitenfeld open-pit mine in Leipzig Bezirk, which is presently being opened up, such discussions were held as early as 1971. The geologists explore the various layers of the roof rock above the coal and examine their usability as high-quality land. At the time of the opening of the mine, their expert judgement makes it possible separately to mine and to dump the coal from the layers best suited for later reclamation.

The shaping of the former mining areas takes place on the basis of territorial development concepts and the national economic plans. In this connection, the brown coal combines from the very beginning cooperate intensively with the Bezirk and Kreis councils, the local industrial and agricultural enterprises, the scientific institutions, and the landscape architects. As soon as the first dumping sites have been readied, reclamation work begins. The dumping areas are leveled in a manner favorable for intended utilization and surface layers lending themselves to cultivation are put in place. Through the placing of layers of lime and brown-coal ash, irrigation, and other soil-improving measures, the mining enterprises are providing for improvement of soil quality so that things will once more become green and grow after the excavators have moved on.

8272

CS0. 2300/21

GLASS PIPELINES, TUBES FOR CHEMICAL, ELECTRONICS INDUSTRIES

East Berlin NEUES DEUTSCHLAND in German 4/5 Aug 84 p 2

[Article by Michael Best: "Glass Transport Pipelines. Resistant Pipes Made in Ilmenau. Uses From Apartment Buildings to Microelectronics"]

[Text] Glass transport pipelines for gaseous, liquid and solid materials are in common use today. More than 200 piping systems made of this brittle but unusually durable material are already in use in industrial and agricultural applications in the GDR. Thousands of tons of gases, water, acids, bases, oils, powders and granulated materials--even tobacco, sugar, coffee, tea, nuts and milk--are pumped through such systems each day. The technical glass combine in Ilmenau is the manufacturer of glass tubes and pipes bearing the "RASOTHERM" name. In 1984, production of "RASOTHERM" glass tubes and pipes will be double what it was in 1976. This manufacturer's product line today largely comprises these products.

As practical experience in apartment building construction has shown, hot water pipes made of glass last at least three times longer than galvanized steel pipes in modern apartment buildings. This year glass risers will be installed in 30,000 such apartments, and preparation is under way to use them in apartment renovation as well. In this regard, the Ilmenau glass manufacturers are working very closely with the technical building outfitting combine, the Suhl apartment building construction combine and other manufacturers in the construction field. The goal of this joint endeavor is to significantly increase quality and make more extensive use of our own raw materials.

The technical glass combine in Ilmenau, which comprises 15 factories, is continuing to establish glass manufacturing traditions in the Ilmenau area with the manufacture of a total of 40,000 different products. The first x-ray tubes were made in the glassworks here in the 19th century for Konrad Roentgen. The first incandescent lamps with glass bulbs were made in Ilmenau a short time later and introduced on the market. In only one and one half days, as many products are produced in Ilmenau today as in all of 1970 in the old factory. Thermos bottles such as those manufactured by the state thermos combine factory were also first manufactured here when the double-wall insulating bottles were invented.

In honor of the 30th anniversary of the GDR in 1979, a modern industrial complex began operation in the main factory of the combine, the factory for technical glass in Ilmenau. This new complex today incorporates the most important of the total of nine product lines, including the manufacture of hollow glassware for chemical and technical applications, glass pipes and tubes, equipment for rationalization and quartz glass.

The combine also is becoming increasingly important in the growing microelectronics industry. For example, crucibles for growing silicon crystals, a base material in the manufacture of semiconductor components, are produced here in largely automatic or semi-automatic processes which are controlled by microelectronics. Only crucibles manufactured under extremely pure conditions are suitable for this type of application.

The reliability of the combine's products is evidenced both by satisfied customers at home and abroad and quality certification by the Office for Standardization, Measurement and Product Testing of the GDR, the "germanischer Lloyd" Classification Society, Hamburg, and the Federal Physics Institute of the FRG in Braunschweig.

The growing economic capacity of the combine went hand in hand with far-reaching sociopolitical advances. In 1984, more than 6.7 million (east) marks will be spent to improve the working and living conditions of the combine's employees, and will be used, among other things, to establish an outpatient clinic within the combine, numerous vacation facilities for children and adults, and the combine's own cultural and sports activities. The first combination kindergarten and nursery was established ten years ago in Ilmenau in conjunction with the combine's own "Kaethe Kollwitz" project. The construction of new apartment buildings also changed the appearance of this Thuringian kreis city. Already 1100 new apartments have been turned over to their occupants, primarily glass workers, thus measurably improving their standard of living over the past eight years.

12644

CSO: 2300/23

BRIEFS

ENVIRONMENTAL COOPERATION WITH NORWAY--A GDR delegation headed by deputy chairman, Council of Ministers and Minister for Environmental Protection and Water Management Dr Hans Reichelt has visited Norway for the purpose of carrying on consultations concerning cooperation between the GDR and the Kingdom of Norway in the spheres of environmental protection and water management. The visit was made in response to an invitation extended by Mrs Takel Surlien, the Norwegian minister for environmental protection. The focal aspect of the visit, which ended on Thursday, was an intensive experience exchange with politicians, scientists, and experts concerning the efforts made by both states in their environmental policies. In this connection, particular attention was paid to the preservation of clean air, protection of bodies of water and rational utilization of natural resources. In the course of the talks it was determined that preservation and securing of peace are indispensable requirements for a successful realization of environmental protection measures. It was further determined that there exists no reasonable alternative for the policy of peaceful coexistence in the relations between states with different social orders. The cooperation developed in recent years in the spheres of environmental protection and rational utilization of natural resources was assessed by both sides as being very useful and capable of further development. Agreements were reached with respect to measures involving further development of pertinent scientific-technical cooperation. [Text] [East Berlin BAUERN-ECHO in German 31 Aug 84 p 1] 8272

NEW CRANE PRODUCED--Workers at the state crane construction enterprise in Eberswalde are currently working on the first production series of a new crane called the "Atlant". Production will begin next year. This product in a new generation of cranes manufactured using modern technologies and less expensive processes is the current topic of discussion in the collectives concerning the plan for 1985. The "Atlant" incorporates many features for economically loading and unloading bulk and piece goods at deep-sea ports. Its eight meter longer working radius and increased lifting capacity of 20 metric tons give it greater handling capacity than its predecessors. The first of the "Atlant" cranes are already being used successfully in Rostock und Murmansk. The Soviet Union is the most important trading partner for the Eberswalde state crane construction enterprise which is part of the TAKRAF combine. In August

of this year the Eberswalde enterprise will turn over its 2000th "giant" to the Soviet Union. Cranes manufactured by the Eberswalde enterprise are at work today at inland and coastal ports in 30 countries on four continents, thus making the Eberswalde enterprise one of the largest manufacturers of its kind in Europe. Over 100 hoisting machines leave the shop hangars each year, and are installed by Eberswalde specialists at their places of use. The 3000 factory employees are constantly aware of the need to combine rational and effective manufacturing with increased product quality. [Text] [East Berlin BAUERN-ECHO in German 1 Aug 84 p 2] 12644

PLASTIC CONSTRUCTION MATERIAL DEVELOPED--The plastics engineering school associated with the Bitterfeld chemical combine is currently having success in the increased use of treated plastics and material from other sources. Post-chlorinated PVC, for example, is to be used in the future for fittings and for hot water pipes in apartment buildings. Practical experience with these products has already been gained in the modern Silberhoehe district of Halle. Plastic pipes used in the past were suitable only for supplying cold water, because the plastic is not heat-resistant enough. Chlorination gives the PVC powder special characteristics; it is nearly non-combustible, and it is resistant to boiling and chemicals. It can also be injection-molded as well as extruded. This type of pipe lasts roughly five times as long as galvanized steel pipe which corrodes easily. The new fittings will be used to interconnect glass as well as plastic pipes. Additional results achieved by the plastics engineering school are the development of a soft granulated material suitable for the soles of shoes and the use of fillers for the Ekazell pipes (PVC pipes with foam walls) also developed at the school. Promising results have also been obtained together with the Cottbus engineering college and the Erfurt construction and installation combine in the development of polyethylene for use as roof sheeting. This material was used for the first time in the construction of the Cottbus municipal auditorium. [Text] [East Berlin NEUES DEUTSCHLAND in German 3 Aug 84 p 2] 12644

CSO: 2300/23

SUPERVISION OF LEGALITY OF NEW TYPES OF ENTERPRISES DISCUSSED

Budapest FIGYELO in Hungarian No 83, 20 Sep 84 pp 1, 3

/Article by Dr Lajos Bosanszky/

/Text/ In the new management system which is going to be developed during 1985 ownership guidance will be replaced by a system of legal supervision. This development will change the relationship between the enterprise and its managing and founding authority. There are certainly many who are eager to learn what kinds of changes will be brought about by this new arrangement for the enterprises.

The aim of the supervision of legality of an enterprise is--similar to the principles already laid down 15 years ago by the laws concerning the cooperatives--to guarantee the lawful functions of these organizations. The state, when exercising its right of legal supervision sees to it that the bylaws and other rules of self-government of the enterprises be in full agreement with the laws and the stipulations of the founding charter. It further takes the necessary provisions that the functions of the enterprises' autonomous organization, as well as the activities and decisions of their managers be in concert with both the laws concerning their setup and self-government system and the rules established by their founding charter and internal statutes.

However, the concept of legal supervision does not authorize the state to exercise ownership rights over the enterprises, i.e. to control their economic-financial deals, to check on the activities of their internal organization from a commercial angle, to watch over their compliance with prescriptions of professional character and to judge the merit of such cases to which the rules of civil or labor laws are applicable.

All this does not mean, of course, that the enterprises can henceforth proceed with their economic activities without any control whatsoever. The pertinent state organizations continue with their legal functions, i.e. they supervise and if need be enforce compliance with the laws of professional character (labor-safety, health-protection, building safety ordinance, etc.).

According to a resolution adopted by the Central Committee of the MSZMP last April, legal supervision over the new types of enterprises will be exercised by the founding organization. Yet proper compliance with this decision is not simple; it may be jeopardized by two circumstances.

An enterprise may be founded not only by an authority of the state administration (minister or council). National associations, interest protecting agencies of the cooperatives, enterprises and financial institutions are also authorized to do so. However the latter as founders cannot act as supervisors of legality, since this right is reserved for the state authorities. Thus this rule cannot be applied to the supervising of legality of enterprises which have been founded by cooperatives or are subsidiary companies of another enterprise.

The founding state authority that exercises ownership rights over a public company often undertakes also managerial functions. In other words such a state organization exercises a threefold authority over the same enterprise and this might lead to confusion. The unfortunate situation may arise that state organizations meddle--primarily on the basis of their ownership rights--into the enterprise's management, on top of its legal supervision, violating thereby its autonomy.

There is only one possible solution for this problem, namely that the law, in agreement with the political trend, decree as a general rule that supervision of legality must be exercised by the founding organization. If an enterprise has not been established by a state agency, then the pertinent organization of the county (or capital city) council should be charged with its legal supervision. It further should be made possible, as an exception, that if the founder is a cabinet minister or a state agency with national authority, then supervision of legality be transferred to the competent authority of a council, as in the case of the supervision of economic associations. On the other hand within the ministry supervision of legality should be charged to such an internal organizational unit which does not exercise ownership rights and does not perform specific administrative tasks, and thus an undesirable jumbling of the spheres of authority may perhaps be prevented.

The Procedural System

Legal supervision entails bipolar activities: on the one hand it includes surveying the foundation of autonomous enterprises and the transformation of the already existing ones into such units, and on the other hand watching over the legality of the working enterprises.

These two spheres of activities pursue the same goals but their performance requires different methods. For the legality of the foundation (transformation) process has an impact upon the lawfulness of the enterprise's future activities as a whole. The act of foundation not being very simple, the supervisor of legality applies harder methods in that process. This means that during the process of formation, from the creation of the autonomous unit up to the beginnings of its smooth functioning, the legal authority stands in almost daily contact with the evolving organism, watches over its legality and takes the necessary measures to prevent any kind of illegality. But it also complements this harder kind of supervision by the kind of supporting cooperation that helps the enterprises overcome the difficulties of formation.

Following the issuance of the founding character, the employees in charge of the emerging enterprise report the beginning of the formation process to the

legal supervisory organization, whose task from there on is to inform them about the legal requirements of founding. It is advisable that the legal supervisory organization attend the corporate meetings that are dealing with organizational matters and the internal buildup, in order to bar any probability of an infringement of the law. It thereby protects the enterprise against unlawful decisions which could prevent its realization.

From the legal point of view it seems necessary to supervise the regulations concerning self-government (organizational, operational and labor rules) article by article and also the decisions of the enterprise management that have adopted them. If the circumstances of the foundation or the founding charter are illegal, the supervising organ will refuse to approve the foundation. However it would be proper to grant the right of legal remedy against such a decision.

During the period following the formation of an enterprise other less strict methods of supervision may be applied in order to enforce lawfulness. The activities of the enterprise will be reviewed at regular intervals. It will be appropriate to extend such inspections to the lawfulness of the internal rules concerning autonomy and to verify whether or not the stipulations of the charter and all such laws which set forth regulations concerning the internal buildup and functioning of enterprise autonomy have been implemented. Such inspections may be all-embracing or partial. In the beginning they should be undertaken at intervals of 2 or 3 years, but later on as well they should be made at least at the end of each electoral cycle.

It is important that full inspections should ascertain whether or not the stipulations of an earlier supervision have been carried out and whether the errors and breaches of law discovered by an organization which is authorized to control the enterprise have been corrected. It is also necessary to make spot checks time and again.

Detailed or Spot Check Controls

When either regular inspections are made at 2 or 3 years of intervals or spot-checks less regularly, a detailed control is only then worthwhile when the character of the issues--for example the legality of the decisions--warrant it. In such cases a full inquiry into all matters and decisions is justified. In other cases sampling or spotchecks may be satisfactory, however the implementation of the provisions made by an earlier decision must always be controlled.

The inspection must be based in all cases on documents (notes, inventories). However the findings should be discussed with the manager or the responsible foreman. In cases of violations of the law the legal supervisor is obliged to stop them. Yet before applying any means of coercion, the administrative state organization makes the minutes, which were drawn up on the investigation, available to the enterprise and calls upon management to terminate the situation that constitutes a breach of law. This may be followed by measures of the supervising authority which we can divide into three categories:

Preventive Provisions:

--suspending the implementation of all such measures and decisions which violate the law and convocation of a meeting of the corporate body. The purpose of these provisions is to prevent a breach of law, and/or eliminate or moderate its impact.

Provisions of Legal Redress:

--annulment of the decisions which infringe upon the law; call on management to adopt a decision if the breach of law consists of the corporate body's or the manager's omission to adopt such a decision. In these cases the purpose is the restoration of a lawful situation.

Retaliations:

--opening of a disciplinary procedure, suspension of the enterprise's autonomy and delegation of a state inspector; initiation of the liquidation process against the enterprise. These provisions are to be applied if other measures have proved to be ineffective, and/or the breach of law has been of such a gravity that it jeopardizes the success of the enterprise's business activity.

Controversial Questions

The system of legal supervision of the enterprises has been, of course, the topic of a great deal of discussion. One of the most controversial questions is their liquidation. According to certain opinions the verdict concerning the winding up of an enterprise should belong to the sphere of authority of the organization which exercises the supervision of legality. Yet the right of suppressing an enterprise forms part of the ownership rights of the founder who is entitled to decree its liquidation, as it is his right to change the character of an autonomous enterprise if the exercise of its autonomy infringes upon the law and if no other redress of the lawful situation is possible.

Another subject of controversy is whether or not the authority of legal supervision can penalize the enterprise because of a breach of law. There are some who would break a lance for this. In case of the cooperatives such a stipulation had existed earlier but it was suppressed by the 1917 cooperative law, since theoretically it was incompatible with the system of supervision of legality and in practice it did not live up to the expectations.

The question also arises what the functional limit of this supervising authority is and what is its scope with respect to the enterprises' lawful activities, since numerous areas of their business are regulated by law, from their functioning to their finances and labor protection. The sphere of authority of the supervising organization does not include such activities of the enterprises or any other economic units which are controlled by various other state organizations acting on their own official authority. Such are the control of the various plant-protecting, animal and human health-protecting, construction policing and fire-fighting regulations and the provisions concerning commerce, manufacturing, transportation, etc. Neither do they supervise compliance with

laws belonging to the area of responsibility of the financial state organizations within the framework of their economic-financial auditing job.

However the sphere of control exercised by the supervisors of legality will include the provisions of the enterprise law and the clauses it represents, surveillance over compliance with the general ruler concerning economic activities and over the implementation of the stipulations of the founding charter and other internal regulations, and control over the observation of all such regulations which do not belong to the specific sphere of authority of any other state organization, yet contain rules of general validity concerning the organization and functioning of the enterprises. Such are for example: scrutiny into the lawfulness of the work of personnel and control over the implementation of stipulations concerning the files, the register of complaints, etc.

12312

CSO: 2500/19

OPERATION OF INDUSTRIAL ENTERPRISES IN 1983 EXAMINED

Budapest FIGYELO in Hungarian No 37, 13 Sep 84 p 4

[Article by Katalin Kovacs, Mrs Fazekas: "Management--On The Whole"]

[Text] The achievements of industrial enterprises (including small enterprises and small cooperatives) increased in 1983 by 7.3 percent, that is 5.6 billion forints, and reached a total of 83.2 billion forints. This can be attributed primarily to the extra export achievement, which improved the profitability of management also.

What sort of interdependence is there between the change in the profitability of the large enterprises and the development of their income produced (net production value)? What sort of individual achievements are hidden by the average profitability? The analysis involves enterprises working with an average assets value exceeding 1.5 billion forints. The number of these is 94. They produce more than half of the net production value of industry and well represent the production of the majority of the branches also. The large enterprises studied realized 43 percent of the industrial achievement in 1983, more than in the preceding year by nearly 5 percentage points, thus the achievements of this group developed substantially more favorably than did those of the other enterprises of industry.

The achievement increased at 61 of the 94 large enterprises and it decreased at 33 of them. The number operating at a loss (9) did not change, but the total of their losses decreased.

The achievements for a branch as a whole increased at a significant pace in 1982 only in the machine industry; it hardly changed in the construction industry and it decreased in the other branches. In contrast to this, achievements increased in the sphere of large enterprises in the construction materials industry, light industry and mining, in addition to the machine industry. At the same time, the decrease in achievements for the large enterprises of the electric power industry, metallurgy and the foodstuffs industry exceeded the branch averages.

The branch achievements for mining, metallurgy and light industry decreased in 1983 because of mining. The metallurgical large enterprises which had been operating at a loss earlier were able to show a profit in 1983. In the branches increasing their achievements the increase was at a faster pace for

the large enterprises than it was for the others, with the exception of the chemical industry.

Development in 1983 of the Achievement of the Branches as a Whole and of Their Large Enterprises

Branch	The Large Enterprises Studied		Branch as a Whole	
	Number	A c h i e v e m e n t In Billions of forints	In percent of pre- vious year	
Mining	10	2,091	82.5	83.7
Electric Power Industry	11	962	240.0	221.9
Metallurgy	11	1,308	(a)	99.8
Machine Industry	22	14,471	116.8	111.5
Construction Materials Ind.	3	1,550	110.6	105.8
Chemical Industry	16	9,692	106.8	109.6
Light Industry	9	3,597	107.1	98.9
Foodstuffs Industry	12	2,251	121.9	109.2
Industry total	94	35,922	119.9	107.3

(a) The deficit in 1982 was 1,040 million forints.

The large enterprises of machine industry can thank their export receipts for their favorable achievements, metallurgy can thank domestic sales for theirs.

The development of the large enterprise achievements, more favorable than the industrial average, is also reflected in an improvement in the profitability of their management. While the assets and wage proportional profit of industry as a whole improved to only a very small degree, by 0.2 percentage points, that of the large enterprises improved by 1.2 percentage points. This moderated the fact that the latter group lagged behind the average 9.9 percent assets and wage proportional profit, but even so the deviation in 1983 was 2 percentage points.

Management proved to be most profitable in 1983 for the large enterprises of the machine industry, followed by those of light industry and chemical industry. There was a change in the fourth position of the branch ranking; a year earlier, the large enterprises of foodstuffs industry were in only sixth place. The large enterprises of metallurgy moved up one step to seventh place. The large enterprises of the construction materials industry, mining and the electric power industry each slipped one position.

The differences in profitability or the change in the profitability of the large enterprises can be best characterized by degrees.

Distribution of Several Large Enterprises by Profitability Groups in 1982 and 1983

	Profitability (percent) in 1983						Total in 1983
	Under 0	0-5	6-10	11-15	16-20	21 and over	
Profitability (%) in 1982							
Under 0	5	4	--	--	--	--	9
0-5	1	25	4	--	--	--	30
6-10	2	1	12	4	--	--	19
11-15	--	--	4	9	1	--	14
16-20	--	1	--	4	3	1	9
21 and over	1	--	--	1	5	6	13
Total, 1982	9	31	20	18	9	7	94

For 60 enterprises the change in profitability was smaller than 5 percentage points, so their profitability degree did not change. A total of 14 enterprises went into a lower range because of decreasing profitability, but there was not one which slipped several degrees. (There were 5 such in 1982.) At the same time, the number of large enterprises at which profitability improved to a large degree was significant in 1983; 20 achieved an improvement exceeding 5 percentage points and 5 of them went up the profitability scale several degrees. (There was no such case last year.)

As a result of all this the spread of large enterprises according to profitability decreased.

Studying the profitability ranking of the large enterprises, the number of those changing places, as compared to the preceding year, was significant; 42 moved up and 46 ended in a worse position than earlier.

Of the 10 mining enterprises studied 8 fell in the ranking, four of them by 20-23 places.

With one exception the 11 electric power industry enterprises studied moved up, but this did not represent a significant position change.

The metallurgical enterprises placed in the profitability ranking with a great deal of spread. Half the enterprises were in a better position and half in a worse position than one year earlier. A significant advance in the ranking (more than 40 places) took place for two enterprises.

Of the 22 large enterprises of the machine industry the position of two did not change, the position of eight improved and the position of 12 worsened. More than half of the enterprises studied--as in the preceding year--placed in the first third of the field.

As a whole the profitability situation of the 16 large enterprises of the chemical industry is favorable. Ten of the 35 most profitable managers are

chemical industry enterprises, although a chemical industry enterprise also stands in last place in the ranking. The profitability position improved for nine of the chemical industry enterprises studied and it worsened for seven.

The majority of the nine light industry enterprises studied placed in the second third of the profitability ranking; three of them moved down in the ranking compared to one year earlier.

The large enterprises of foodstuffs industry--similar to those in metallurgy--occupy very differing positions in the profitability ranking. They can be found among the highest and the lowest profitability enterprises.

In addition to differing efficiency, the price changes also had different effects on the link between the income produced by the several enterprises and their profitability. There can also be significant differences in the live work needed for production and the wage level which has developed. The situation of the enterprises also differs according to whether they enjoy extra support from the budget or whether the withdrawals exceed the supports received.

Number of Enterprises According to Income Proportion Produced and Profitability, 1983

Profitability Percent	Income Proportion Produced, Percent					Total
	Under 10	11-20	21-30	31-40	41 and above	
Under 0	5	4	--	--	--	9
0-5	8	8	10	1	3	30
6-10	1	11	4	3	--	19
11-15	--	--	5	5	4	14
16-20	1	--	2	3	3	9
Over 20	1	--	1	3	8	13
Total	10	23	22	15	18	94

Deficit management did not occur for the enterprises with an income proportion exceeding 20 percent. With the increase in the income proportion produced there are more and more higher profitability enterprises, but there is very low profitability, between 0 and 5 percent, even among the enterprises with an income proportion produced which exceeds 40 percent. At the same time, even with a low income proportion produced, under 10 percent, there was profitability exceeding 15 and even 20 percent.

The link between the place occupied by the enterprises in a ranking according to profitability and according to the income proportion produced is mediocre; indeed, one can observe a sort of deviation of the two rankings from one another. (The value of the rank correlation was plus 0.52 in 1983 and plus 0.63 in 1982.)

Thus a significant improvement took place in 1983 in the income situation of the large industrial enterprises.

The ranking of the large enterprises according to profitability level which developed in 1983 deviates significantly from last year. In 1983 those in the first third of the ranking were primarily large enterprises of machine industry and chemical industry; those in the middle were large light industry enterprises; and those in the last third were primarily large electric power industry and mining enterprises.

8984

CSO: 2500/621

TAXATION, ECONOMIC GROWTH VIEWED

Budapest FIGYELO in Hungarian No 34, 23 Aug 84 p 4

[Article by Antonia Hutt1]

[Text] The slowing down of economic development affects the national budget in a sensitive manner. The tax basis constituting the most important source of income does not grow at the same pace as do the budgetary expenses. At such times the national budget employs, as a proven recipe, the curtailing of surplus income through increased taxes. A convincing argument for doing so is that the taxes put a brake to the overdifferentiation of incomes, and this is proper for social justice.

Beside the short-term, concrete advantages of more severe taxation, sight is often lost of the long-term, usually indirect effect: that taxation influences the performance of the sectors taxed

To measure the indirect effects a few theoretical hypotheses must be accepted and practical knowledge of economics and statistical methods must be used in conjunction with these.

It was this research that was undertaken, upon commission by the World Bank, by Keith Marclen. On the basis of broad-based international comparisons and using mathematical-statistical tools he demonstrated how taxation policy affects the entire economic growth of the individual countries and the main growth factors (investments, export, employment, work productivity and innovation). The author supports his own observations with similar conclusions by others. In economic growth, of course, taxation policy is not the sole influencing factor; the growth-stimulating or inhibiting role of natural endowments, social and political circumstances, etc, is well known. The research attempted to filter out the other effective factors by putting the 20 analyzed countries in pairs on the basis of similar per capita incomes and the growing tax/GDP ratios, and it compared the levels of economic development reached by the two groups in the seventies.

The results--even with all the reservations that such an aggregated research must be treated with--speak for themselves. In the case of practically every growth factor the retracting, growth-braking effect of tax increase can be demonstrated with statistically satisfactory certainty.

In Light of Statistics

A few statistical results of the estimates are:

A 1-percent increase in the tax/GDP ratio causes in

--economic growth	.36
--investments	.66, and in
--work productivity	.28

percent decreases.

If we examine the effects of those types of taxes that are the most closely connected with the individual factors, then we will find stronger relationships: the tax increase will moderate economic growth more powerfully. For example, a 1-percent increase in enterprise income taxes will slow down the pace of investments not by .66 but by 2.13 percent.

A weaker relationship may be indicated with employment; the highest coefficient (-.19) belongs to wage tax contribution to social insurance.

Recently several similar research projects have been carried out throughout the world and they have all confirmed this same tendency.

There is no need for a special explanation of the fact that tax increase reduces enterprise profit and thereby curbs investments. Taxes do not merely reduce investment resources but, as an effect of the unfavorable prospects for profit, investors voluntarily refrain from investing.

Enterprise tax policies in the various countries differ from each other, above all, in the area of tax reliefs and their extent; beyond a general incentive they make possible giving preference to growth-stimulating sectors, e.g., investments for export purposes. This is one of the effective methods of enhancing export incentives.

Export Tax and Incentives

Virtually every country employs radical means to stimulate export. Yet, what is the explanation for the fact that the taxes on foreign trade have a strong influence upon export? In countries with high taxation the export-compensating systems are frequently bound to procedures so complicated, that their stimulating character is largely lost. High tariffs reduce the attraction of export from two sides: on the one hand they increase the low material prices indispensable for profitable export and, on the other, they over-protect the domestic producers on the domestic market. Any tax affecting retail consumption, be it levied as personal income tax or as an indirect product tax, will sooner or later drive up wage costs and will weaken the competitive potential of the products on the world market.

The economic development induced by export absorbs the surplus in manpower. And a low personal income tax stimulates the people in the work force to prefer work to leisure. These two effects together result in increased employment.

Work productivity--in the countries examined--is influenced above all by the fact that economic growth oriented toward export means an expansion of the sectors of processing industry having higher production efficiency. A more indirect but real effect is that the favorable economic prospects make both families and enterprises interested in financing expenses of instruction and further education. And the higher level of professional education improves productivity.

The stimulating character of taxation demonstrated here is--according to the research--more efficient in the less developed countries, probably on account of the greater productivity growth possibility derivable from modern technology, professional education, and the changes in branch structure.

Economic development can be ascribed to a significant extent to technical-technological progress. It has been calculated that about one-third of the annual average 3.5 percent growth reached by the United States between 1948 and 1976 came from innovations. The same research also verifies the fact that the extent of technical renewal stands in an inverse ratio to the amount of capital taxation.

The concatenation of effects: taxation policy--growth factors--economic development can, in a given situation, create favorable conditions also for financial policy. Economic growth broadens the tax basis, and thus the state budget gets dynamically increasing amounts of income even without tax increases. And the increase in income can be used--since low taxation results, as shown by practice up to now, generally in fewer interventions--for the concentrated financing of the purposes of social welfare and of increasing efficiency.

It is true that the social effects of taxation policy are difficult to demonstrate. One cannot prove the relationship, intended to justify higher taxation, that the social services paid for to a higher extent from the state budget would indeed increase social welfare. From the available data one cannot verify the hypothesis that high taxation would result in a more nearly equal distribution of income. The average span of life, as the most general welfare indicator, according to the research does not depend upon the degree of budgetary income centralization. But there is a generally known, close, positive relationship between the level of economic development and the average life span; in this, in the long run, the role of taxation policy to stimulate development is paramount.

Of course, it would be wrong to interpret the above statements to mean that a change in taxation policy could lead to rapid economic successes. A very important question is the timing of tax modification: at a time of recession in world economy the stimulation of export will run into the limits established by demand. Taxation policy can, even under favorable economic conditions, exert its positive effect only in the long run. The reactions of the enterprises, consumers and the members of the work force show themselves only after a delay of several years. The possibilities of taxation policy must and can be utilized not as a miracle drug for an ailing economy but as an impulse to stimulate healthy growth.

STUDY ON ECONOMIC CALCULATION DISCUSSED

Budapest FIGYELO in Hungarian No 34, 23 Aug 84 p 5

[Article by Dr Otto Gado: "Lessons of a Debate: An Economic Stopsign"]

[Text] As chairman of the OMFB's working committee on calculations, I took great pleasure in the public responses to our study* on calculations which appeared in the fifth issue of FIGYELO in 1984.

The FIGYELO articles, representing various points of view, emphasized that this method is well-known, and has been introduced in educational institutions as well. Some people commented with nostalgia on the proposals.

Even the authors of the study pointed out that this is not a "discovery" of a new concept. Instead, if and only if various regulations and variables controlling calculations change, along with changes in price-forming mechanisms, then will the new supplementary calculations be eliminated. We can also rule out the disadvantageous results of product rankings based upon hard currency producing potential. Relative income producing potential rankings are also eliminated. Therefore, those enterprise managers, who have up to now attempted to operate with supplementary or secondary economic calculations parallel to official regulations, are afforded broad opportunities.

The essence of this progressive step is the following: calculations will not serve to orient the authorities, instead, they will aid in the preparation of enterprise decisions.

Only Possibility

Of course, as many commentators have pointed out, changing the method of calculation by itself will not increase production or exports. But, according to the study, the elimination of many variables and influences, which up to now have held back the exploitation of export opportunities (for example, the relative income-producing constraints) creates an opportunity for exports

*"Economic Calculation for the Better Utilization of Production Capacities." Bela Csikos Nagy, Otto Gado, and Edit Javorka participated in compiling the study.

to expand. Of course, this is only a potential, and not an automatic increase. It is also true that the impact varies widely among various enterprises, depending upon the portion of total output that exports make up.

The proposed method of economic calculation does not apply to firms producing a single product, which use a dividing calculation instead of the supplementary calculation anyway. It is also true that the potential is different at enterprises engaging in short or long production runs. This is because putting together or modifying the product structure can represent a deviating task.

Unfortunately, it is very typical in practice to view the issue only from the perspective of price formation. Economic calculation is not only a method of setting prices, since one cannot simply "create" prices on the basis of calculations. Economic calculation can serve other enterprise goals: product structure, development of sales, capacity utilization and optimization of enterprise profits.

The proper position appears in the commentaries: as long as variable costs apply to output, the proportion of costs covered will remain an enterprise function.

Some pointed out that the elimination of the constraints should not be followed by an unjustified level of centralized regulation of the economic calculation system. I sincerely hope that based upon the lessons learned from similar interventions on the part of the authorities, this danger can be avoided.

Where Loss Is Certain

Besides ranking projects based upon expenses covered, other socio-economic indicators could influence enterprise behavior. (For example, need for imports, employment, etc.) This however does not mean that clear vision based upon economic calculation will not be advantageous when a firm attempts to coordinate the optimization of various indicators. As some have already pointed out, more attention should be paid to the following: the analysis of non-linear variable costs, efficient enterprise organization, and supplementary calculations concerning the distribution of output. More attention should also be paid to changes in hard currency evaluation and the proposed solutions which also could influence enterprise decisions.

The commentators made it clear that designating a theoretical "break-even point" does not mean that firms will set selling prices at that point. It is just the opposite, since setting a lower price limit is like a "Do not enter" sign. That is, going beyond that point guarantees that a loss will be made. However, depending on how management adjusts the schedule, the coverage of expenses changes (declines) and profits vary within this bracket. Profit maximization remains unchanged as the principal goal of the enterprise. Economic calculation is a method of attaining this, and nothing more. If this method is better than the ones currently in use, then sooner or later this fact will show up in profits.

Many commentaries noted that the markets, that is, the firms, are still not forced by current price control mechanisms to use prices determined by supplementary calculations. Instead they deviate from this standard, for example, they use capacity utilization measures instead. These opportunities will only expand if the constraints called for by the calculation regulations are eliminated.

Tool of Market Building

A fundamental question that has to be asked is whether we should wait with the use of economic calculation until market conditions are sufficiently developed in certain areas? Or, conversely, this also could be a tool to promote the development of the market conditions. In principle, the study supports the latter point-of-view. The study also asserts that "market building" plans should be worked out in detail within the framework of the further development of the economic guidance system. Therefore, coordinated steps have to be taken to further develop market building and the calculation system. The progressive use of calculation is not necessarily advantageous by itself, since it may create the illusion that market forces may be replaced by mere constructions. At the same time, however, the risks of inaction due to the lack of market conditions have to be evaluated rather seriously. This includes neglected profits as well.

In this regard, the only voiced real concern was that the proposed calculation system and the related price and other regulating measures--amidst present market conditions--would hasten domestic price increases. On the other hand, others pointed out that until now the price changes weren't determined by calculations.

The debate articles which appeared in FIGYELO properly pointed out that the "prime cost" derived from the supplementary method does not provide a sufficient basis for the regulatory agencies to determine whether a price is "justifiable."

In my opinion, the concern over firms which unjustifiably cover a low proportion of their export product expenses, and make up the difference in domestic sales, is not proper. Prices abroad, and hopefully soon domestically, are not primarily dependent upon the producers' costs. In actuality it can happen that a firm lowers its foreign prices to the extent that the market allows it, since otherwise it would be decreasing its profits unjustifiably. This is happening today, but it requires support from elsewhere. This support requires net income, which has to "be produced" somewhere, before this support can be provided.

Undue concern should not be permitted to block progress in the proper direction. We should not allow such a faulty view to emerge which believes in marking time, while trying to solve the problems of the price level, capacity usage etc. Let us move forward carefully. Perhaps in certain areas we will have to use restrictive measures--for example, warning the price control authorities of an impending price hike.

I sincerely trust the notion that in the course of making these changes a reality, regulation can bring about rather optimum conditions. When one commentator mentioned the past, he justly pointed out that we should not have to wait another 17 years before the opportunities promised by theory become reality.

12791

CSO: 2500/620

AUTO INDUSTRY PRODUCTION PLANS, PROBLEMS SUMMARIZED

Warsaw MOTORYZACJA in Polish No 5, May 84 pp 117-123

[Article by Jerzy Dobosz]

[Excerpts] The factory which 32 years ago began production currently has the technological capability to manufacture 125,000 cars annually. However, in 1982 only 69,000 cars were produced, and in 1983 production will total 85,000, of which 25,000 are Polonez-model cars.

The FSO

The material shortage constitutes the basic reason why production is limited at the FSO [Passenger Car Factory]. It is being predicted that in 1984 production will increase to 95,000, but this again is dependent upon material availability. On 1 November 1983, there was a shortage of complete deliveries of the following ordered materials: cold and hot-rolled sheet metal, rubber, batteries, and paints. One must remain hopeful, however, that the factory's material needs will be satisfied. Work is being carried out at the FSO on structural measures to decrease fuel consumption. In 1984 we hope to equip all Polonez autos with a so-called fuel-saving or automatic ignition system.

Advanced work is being done at the FSO on an engine with automatic ignition. Recently, almost all the firms in the world have been offering their cars with this type of engine. Two versions of the engine have been developed, one of which was selected as the final version. Initial tests indicate that this engine has good technical parameters, specifically:

- engine size is 2,000 cm³;
- horsepower is 47 kW;
- revolutions total 120 Nm;
- weight is 150 kg;
- fuel use per 100 km:

at 90 km per hour	5.11
city driving	7.01
at 120 km per hour	8.01

The engine has passed its technical tests, and durability tests are currently under way. Positive test results will demonstrate the advisability of initiating production. In the words of FSO engineers, the engine is suitable for delivery trucks with a gross weight of 2.5 tons, and for cargo capacity delivery trucks with a total weight of 3.5 tons. The initiation of production of this engine would allow for the elimination of the heavy S-21 engine, whose production is labor-intensive, and the machinery is already in the final stages of use. Therefore, it is necessary to initiate production of the automatic ignition engine, but the FSO cannot cover the expenditures of this venture which is indispensable for the national economy. Therefore, aid from central funds is necessary. Because of the heavy use of tools and especially press tools, the production of the FSO model 125p has entered its final phase. It must be phased out in 3 to 4 years, during which time another model will be developed. A new model is under consideration, one which would:

- weigh less than 800 kg;
- seat 5 persons and retain the Polonez interior but would be smaller;
- have fuel consumption of approximately 6.1 liters per 100 km;
- have a 1,200 cm³ engine to be installed transversely in the front;
- have MacPherson strut front suspension;
- have modern rear suspension.

This vehicle must fulfill all requirements. The model built on a 1 to 5 scale and meeting current world trends has already passed testing. A plaster model built on a 1 to 1 scale is ready and will be subjected to the proper tests.

Five prototypes of the new model are to be built this year.

It is understood that expenditures for this car will total zlotys annually, but material usage would be equal to a production total of 120,000 cars of the current model. In addition, 180,000 new cars will use the amount of fuel currently used by 120,000 autos.

Development work is being carried out in close cooperation with the FSM [compact car factory], and it is expected that many of the same engine components will be used in compact and mid-sized cars. The development of a uniform family of engines is being considered; in Bielsko the engine size would be 600 and 900 cm³, and for the FSO it would be 1,000 cm³. A study done by the FSO concerning cooperation among the socialist nations demonstrated that closer cooperation would be feasible. The factory also sees the possibility for cooperation with Western firms. If a partner were found who would finance this venture, then production start-up of the new model would be greatly accelerated. At this time, the FSO cannot finance the undertaking, the cost of which would be approximately 700 billion zlotys. This would only be possible if the factory were to receive tax reductions. But even in that case, the first new models would not be built in less than 4 to 5 years. On the other hand, if there were cooperation with a Western firm, then the assembly line would start up in 2 to 2½ years.

The Compact Car Factory

The first Polish Fiat 126p models left the factory in 1973, and 5 years later in 1978 the factory achieved its full production capacity of 200,000 cars.

In 1980 this amount was surpassed and over 214,000 cars were built. The 1983 plan stipulated the production of 183,400 cars, 200,000 in 1984, and 205,000 in 1985. Over 60 percent of auto production is for export.

Italy is the number one client, with over 236,000 compact cars exported there in 1983. The FSM is developing other versions of the Fiat 126p, among them:

- Fiat 126p, the standard model;

- Fiat 126p 650, with a more powerful engine of 650 cm³, produced in several versions with different standard equipment and with an improved brake system;

- Fiat 126p 650I, designed for the handicapped, this is an original design by OBRSM engineers;

- Fiat 126p E, an economical version recently put into production. It is characterized by a complete package of engine modifications, including changes in the combustion chamber, camshaft, ignition system, making two ignition coils out of one, carburetor, and use of a new type of muffler.

The factory is devoting great attention to the production of spare parts. Parts for the Syrena, which is being phased out of production, will still be manufactured for another 7 years. However, the production of parts manufactured by FSM cooperative producers is being threatened.

The demand for spare parts for the Fiat 126p is very great. In fact, it is much greater on the domestic than on the export market. The reason is the continued use of the cars and the desire to rebuild them. The factory is trying to increase the production of spare parts, which in 1983 totaled approximately 6.5 billion zlotys. A continued production growth of 17 percent is expected. However, production growth capabilities are being limited by a rather low production capacity, material and personnel shortages. The aim is to increase production capacity. The possibilities are not great, however, since current economic mechanisms do not make the funds for the purchase of machinery available. They only allow for exploitation activities. Therefore, the factory is also trying to transfer the production of spare parts to specific cooperatives and firms. In addition, certain components are being imported from bloc countries, to the degree possible.

The factory development and output program for the years 1984-1990 was formulated with consideration for the factory's production and the need for modernization. The replenishment and partial exchange of machinery and a 1987 production goal of 250,000 cars is being predicted in the factory development program. The output development program has formulated a two-stage Fiat 126p modernization program, and 1987 production of the Beskid model.

The Fiat 126p will be exported by the trade firm Fiat until 1990. A stipulation of the sale is the modification of the car according to the firm's program, agreed upon with Polish manufacturers and also taking our market demands into consideration. These considerations include the following two stages of Fiat 126p modernization:

Stage 1: At the end of 1984, modification of the interior and certain external elements, and consequently a change in the car's appearance, is anticipated. The sharp contours will be eliminated and the entire car will have a more streamlined shape.

Stage 2: During 1986-1987 a water-cooled horizontally installed engine will be installed in the rear of the auto. This solution will make it possible to install three doors on the back portion of the car which would make the interior of the car suitable for baggage transport. Certain parts of the chassis will also be modernized, and certain interior and exterior cosmetic changes will also be made. It is being predicted that this type of modernized auto will be in production until the end of 1990.

The FSM is developing a new model with the working name "Beskid." Three prototypes have already been produced, and have been undergoing testing since July 1983. In accordance with the projections of the design engineers, the car will meet world trends that are being predicted for 1986 and 1987. The car's shape will be similar to a teardrop or, as others call it, a wedge. The model silhouette is similar to that of the Opel Junior, which was displayed at the testing track at the recent Frankfurt am Main auto show. A very good drag coefficient of $C_x=0.3$ (it is 0.47 for the Fiat 126p) was attained. A 600 cm³ water-cooled engine installed in the front portion of the auto was used. Factory tests demonstrated that gas consumption at 60 km per hour was 4 l/100 km. The Beskid is 80 mm longer and 110 mm wider than the Fiat 126. Thanks to this rather small increase in dimensions, four adults can ride comfortably. The car has three doors, a trunk which is twice the size of the Fiat 126p trunk, and when the rear seats are put back the trunk space increases by 0.9 cubic m.

Production of the Beskid should begin in 1987 in order for the new car to conform to predicted modern international criteria for those year. It must also be said that the FSM is considering the idea of building another car to be standardized with the Beskid, and which would have a large trunk, an elongated front, and a 1,000 cm³ engine. This could be built outside the factory organization.

The FSM production capacity development program has already been formulated. This program has taken the economic reform mechanisms into consideration, but assumes certain reductions in sales tax and hard currency loans repayable within 3 years. There are, however, no binding decisions which allow for activity in accordance with just such a program.

The preparations for production of the Beskid necessitate investment expenditures of over 26 billion zlotys. The cost involved in the initiation of Beskid production will total approximately 30 percent of the hard currency

allocation and approximately 20 percent of the zloty allocation with respect to the total outlay for completion of the development program. In other words, Beskid production initiation totals one-third of the cost and modernization of the Fiat 216p. In the factory's opinion, the combination of these two elements will allow for the initiation of Beskid production with the smallest possible expenditure.

The Lublin Truck Factory

It is being taken for granted that the production of a new Zuk 325 delivery truck will be initiated in 1986. The truck has a total weight of 2.5 tons and a cargo capacity of 1 ton. This will be a transitional vehicle, since a cargo capacity of 1.8 tons is being aimed for. The 4C90 automatic ignition engine produced by the WSW Andoria in Andrychow will be installed in the Zuk 325. An agreement was concluded between the FSC and WSW Andoria whereby the 4C90 engine would be used regardless of any central decisions. Annual production of the engine will total 2.5 million.

The automatic ignition engine developed by the FSM, and the S-21 engine currently in use, can also be used in the Zuk 325.

The FSC will produce a main transmission axle with hypoid gear coupling which is also adaptable to front-wheel drive. There is still no decision on the gear box. Discussions conducted with the Yugoslav firm Crvena Zastava did not bring positive results. A gear box adapted to revolutions of 150 Nm is available; however, this is not suitable for a vehicle weighing 3.5 tons. Therefore, consideration is being given to whether the present gear box can be modified into a four-gear system, or whether a new transmission should be manufactured. The matter of localizing production is also open to discussion.

The Delivery Truck Factory [FSD]

The FSD is preparing its version of the Nysa on the basis of the Zuk 325. These versions will serve as models for the near future. The production of larger vehicles is not foreseen.

Agricultural Vehicle Factory

Because the development program was halted in 1980, there will be no significant initiation work until 1985.

Presumably, a rigid front axle will be installed on the Tarpan 237 model. The factory is working jointly with the Institute for Industrial Motorization to develop a new passenger and transport vehicle. Front-wheel drive will also be introduced and will be standardized with the Zuk 325 model. A new auto body will be produced in the years 1985-1987.

The Jelcz Automobile Factory [JZS]

The Jelcz, Berliet, and the so-called public buses are being manufactured at the JZS using the Star chassis. The first 10 buses with Ikarus chassis will be built this year. Tests are being made on the use of a Berliet body on an Ikarus chassis. The JZS also does major repairs on Jelcz-Skoda and Jelcz-Berliet buses, and also builds Jelcz 400 and 600 series trucks.

Currently, plans do not exist for practical application of the Strayer license; however, production of a modernized truck is anticipated around 1985, and the Strayer license will be partially utilized at that time.

The Sanok Bus Factory

The factory is currently building long-distance buses measuring 11 and 12 meters, and local buses of the same size are being planned on this basis.

The Starachowice Truck Factory

Currently, the plant is producing three basic types of trucks:

- Star 200 with two axles and 6-ton cargo capacity,
- Star 244 with two axles and 5-ton cargo capacity,
- Star 266 with 3 axles and 3.5-ton cargo capacity and capable of driving over rough terrain.

The modernization of the automatic ignition engine has been one of FSO's great recent achievements. This modernization was primarily based upon the use of a cast-iron frame instead of an aluminum one, thus making the factory independent of imports.

The modernization of the Star 200 is being carried out. New truck models 1142 and 1342 are also being developed. The basic technical data characteristic of the models is as follows:

	<u>Model 1142</u>	<u>Model 1342</u>
Total weight	11 tons	13 tons
Number of wheels/number of driving wheels	4 x 2	4 x 2
Engine	359M	159D (with supercharging)
Cargo capacity	6.5 tons	8 tons

The Debno Stomil Tire Plant

Stomil anticipates the production of 3,070,000 tires in 1983, including 1,330,000 for cooperatives, 730,000 for export, and 1,010,000 for testing purposes. Profits for exports were used to buy raw materials. In 1984, 3,400,000 tires will be produced, with this amount denoting the plant's production capacity.

Tests being conducted at Stomil are designed to develop:

- radial tires with a smaller height ration to the cross-section of the tire, or series 60 or 70 tires;
- tires with a smaller rolling resistance;
- longer tread mileage;
- tubeless tires for domestic automobiles.

In fact, tubeless tires have been in production since 1976, but mainly for export. (Domestically there is very little demand for them.) As a result of various tests, it has been possible to initiate the production of wheel face plates for tubeless tires for the Fiat 126p, FSO-125p, and Polonez models. There is great likelihood that some of the Fiat 126p models will be equipped with tubeless tires this year. Efforts are also under way to develop an economical tire. A reasonable compromise must also be found between increased tread mileage and decreased friction. The development plan for economical tires assumes that mileage will increase by 10 percent and safety parameters (under different conditions) will be maintained at existing levels. The weight and rolling resistance of the tires will be decreased by several percent. Consequently, a decrease of several percent in fuel consumption should be achieved. As Stomil has correctly determined, under limited production capabilities special emphasis must be placed on the proper use of tires and great tread mileage.

In the opinion of the tire manufacturer, the rear wheels on the Fiat 126p are defective; consequently, when the tires are mounted their tread mileage is one-half that of the front tires. The manufacturer has determined that if the toe-in of the rear wheels is decreased, then rear tire tread life would be made equal to that of the front tires. However, this remains a controversial issue among auto and tire manufacturers. The FSM maintains that the established parameters are for a car with four persons. For a two-person car, they could be modified slightly. It appears that both firms concerned should determine the optimal parameters for assembly of the rear wheels.

The Olsztyn Stomil Tire Plant

The factory's basic production consists of tires for trucks (65 percent), agricultural tractors (27 percent), and passenger cars (8 percent). In addition, in Bisztynek there is a factory for tire retreading. Production rose by 23 percent in 1983 in comparison with 1982, and a further 14 percent growth is predicted for 1984. Class 1 tires total 96.3 percent of production, and 21.7 percent possess the national quality seal.

The Olsztyn Stomil Plant is planning the following in the near future:

- stabilize the tendency toward full utilization of machinery;
- increase tire production for tractors by 0.2 billion zlotys in order to meet Ursus demands by 1987.

The initiation of radical tire production, which would make it possible to increase tread mileage, is being anticipated.

12229

CSO: 2600/1297

LOSS OF FARMLAND IN INDIVIDUAL PROVINCES REPORTED

Warsaw WIADOMOSCI STATYSTYCZNE in Polish No 6, Jun 84 pp 33-35

[Article by Dr Mikolaj Zinczuk, Marie Curie-Sklodowska University in Lublin]

[Text] The full satisfaction of the nutritional needs of the people is contingent primarily on the development of food production. The achievement of total self-sufficiency, however, requires that intensive farming be brought up to a high level in general, and that lands be utilized in particular. Table 1 depicts the structure of land utilization. By the structure of land utilization we understand the percentage of land designated for nonfarm purposes in the total land area. A basic illustration of land management is the land balance, portraying the changes occurring in the volume of total land resources and in the structure of land utilization within a given period.

The data in table 1 shows that from 1976 to 1981 in Poland, the total area of arable lands and the area of land under cultivation, meadows and pastures have declined. The area of land utilized by farming is declining as a result of the designation of a part of lands for the needs of other economic sectors.

The amount of land that lends itself to agricultural usage is limited. From 1960 to 1981, the area of land in Poland declined by 1.38 million hectares, for an average yearly loss of 60,000 hectares, while the population during that period rose by 6.6 million.

The per capita area of arable farmland has declined by 21.2 percent compared with 1960 figures. This drop has been compensated for to a great extent by an increase in land productivity.

This study analyzes land management according to territorial structure from 1976 to 1981. This is illustrated by tables 2 to 4.

The per capita area of arable land in the particular provinces shows a wide variation, from 0.09 to 1.38 hectares. In 14 provinces, the area of these arable lands was below the national average. The data in table 2 adds information on the per capita area of arable land for the rural, production-age population.

Not only is the loss of arable land related to the needs of the national economy in the area of housing construction and the expansion and building of

new lines of communication and industrial plants. It likewise emanates from the destruction of lands caused by human activity. Some of these lands have been reclaimed and are once again becoming cultivable soil. A considerable part of them, however, is being put out of production.

An analysis of the structure of arable lands with regard to productivity class shows that from 1976 to 1981, 13,922 hectares of class I-III lands and 43,829 hectares of class IV-V lands were taken out of farm utilization.

The highest percentage of class I-II lands taken out of farm production occurs in the following provinces: Lublin, Walbrzych, Przemysl, Wroclaw, Zamosc and Rzeszow, i.e., in provinces that have relatively good soils. Meanwhile, the lowest percentage of lands of these classes occurs in the provinces of Ostroleka, Suwalki, Bialystok, Czestochowa, Pila and Torun.

An analysis of the structure of arable lands designated for nonfarm purposes shows that housing and industrial lands and mine lands have a dominant share in this.

The share of arable land taken for housing construction far in excess of the national average is demonstrated by the provinces of Bielsko-Biala, Krosno, Krakow-City, Czestochowa and Lublin, while the lowest share is found in Szczecin, Piotrkow, Gorzow, Bialystok, Ostroleka and Walbrzych.

The largest percentage of farmland designated for new industrial capital spending is found in the provinces of Lomza, Legnica, Rzeszow and Elblag, while the smallest percentage occurs in the provinces of Konin, Bialystok, Gorzow, Nowy Sacz and Ostroleka.

The largest percentage of arable land earmarked for new roads and communications networks is in the provinces of Skierniewice, Czestochowa, Krosno, Krakow-City and Poznan.

A relatively large percentage of arable land has been designated for mine land in the provinces of Konin, Piotrkow and Jelenia Gora.

An analysis of land management shows that from 1976 to 1981, a great deal of land was wasted and very often good land was designated for housing construction, roads, communications networks and industrial plants.

During the recent period, Poland has been a negative example of rational land management. The level of usage of available land has varied widely in the particular provinces. The causes are widespread: the advanced age of farmers, the lack of heirs, the parceling out of farms, the dual occupation populace and the like.

It appears that in the coming years, the process of the taking of land out of production will drop off considerably. The law on the protection of farm and forest lands from March 1982 is to serve this end. This law regulates comprehensively the principle of protecting farm and forest lands, as well as the principle of reclaiming idle land and depleted soils. This concerns particularly the best lands, those the most highly suited for production.

Table 1. Changes in the Land Balance From 1976 to 1981 (in hectares)

<u>Item</u>	<u>1976</u>	<u>1981</u>	<u>Changes in 1981 compared to 1976</u>
Arable lands	19,151,078	18,909,785	-241,293
Land under cultivation	14,763,306	14,581,481	-181,825
Orchards	274,421	276,248	+1,827
Meadows	2,555,934	2,515,351	-40,583
Pasture	1,557,417	1,536,705	-20,712
Forests	8,631,302	8,694,306	+63,004
Other lands and idle land	3,485,370	3,664,239	+178,869

Source: the author's workup based on data from the ROCZNIK STATYSTYCZNY [Statistical Yearbook] from 1977 and 1982.

[see following pages for Tables 2-4]

Table 2. Some Supplementary Data Concerning the Area of Arable Land (in hectares)

Provinces	Loss of arable land from 1976- 1981	1981 per capita area of arable land	
		total	of production age in rural areas
(1) Polska	241293	0.52	2.33
(2) Stołeczne warszawskie	49730	0.09	1.26
(3) Białkopodlaskie	2218	1.29	3.47
(4) Białostockie	16071	0.94	3.97
(5) Bielskie	3792	0.27	7.66
(6) Bydgoskie	8591	0.58	2.79
(7) Chełmskie	523	1.09	3.21
(8) Ciechanowskie	5182	1.18	3.15
(9) Częstochowskie	5745	0.48	1.73
(10) Elbląskie	1925	0.89	3.76
(11) Gdańskie	5396	0.29	2.26
(12) Gorzowskie	15380	0.78	3.44
(13) Jeleniogórskie	1455	0.42	1.93
(14) Kaliskie	2367	0.66	2.18
(15) Katowickie	13829	0.09	1.18
(16) Kieleckie	12589	0.55	1.77
(17) Koninśkie	4669	0.86	2.55
(18) Koszalińskie	10712	0.88	3.91
(19) Miejskie krakowskie	3915	0.19	1.10
(20) Krosnienśkie	7248	0.53	1.43
(21) Legnickie	2622	0.54	2.55
(22) Leszczyńskie	1373	0.82	2.71
(23) Lubelskie	4017	0.53	2.08
(24) Łomżyńskie	1054	1.38	3.99
(25) Miejskie łódzkie	2620	0.09	1.75
(26) Nowosądeckie	4098	0.43	1.31
(27) Ostyńskie	4503	1.01	4.07
(28) Opolskie	1956	0.55	1.92
(29) Ostrołęckie	726	1.08	2.85
(30) Olskie	3926	0.97	3.56
(31) Piotrkowskie	8833	0.64	2.07
(32) Płockie	4512	0.80	2.53
(33) Poznańskie	5314	0.43	2.57
(34) Przemyskie	741	0.68	1.44
(35) Radomskie	2392	0.72	2.29
(36) Rzeszowskie	3916	0.44	1.30
(37) Siedleckie	4367	0.96	2.44
(38) Sieradzkie	3435	0.90	2.42
(39) Skierniewickie	3978	0.78	2.99
(40) Słupskie	9250	0.92	3.50
(41) Suwalskie	3277	1.27	4.51
(42) Szczecińskie	11777	0.59	3.87
(43) Tarnobrzeskie	3224	0.68	1.86
(44) Tarnowskie	1798	0.48	1.39
(45) Toruńskie	2300	0.60	2.80
(46) Wałbrzyskie	4137	0.35	2.12
(47) Włocławskie	2545	0.77	2.49
(48) Wrocławskie	2285	0.38	2.35
(49) Zamyskie	2068	1.03	2.47
(50) Zielonogórskie	6872	0.58	2.44

Source: the author's workup based on data from the ROCZNIK STATYSTYCZNY from 1977-1982.

Key:

- | | |
|-------------------|------------------|
| 1. Poland | 26. Nowy Sacz |
| 2. Warsaw-Capital | 27. Olsztyn |
| 3. Biala Podlaska | 28. Opole |
| 4. Bialystok | 29. Ostroleka |
| 5. Bielsko-Biala | 30. Pila |
| 6. Bydgoszcz | 31. Piotrkow |
| 7. Chelm | 32. Plock |
| 8. Ciechanow | 33. Poznan |
| 9. Czestochowa | 34. Przemysl |
| 10. Elblag | 35. Radom |
| 11. Gdansk | 36. Rzeszow |
| 12. Gorzow | 37. Siedlce |
| 13. Jelenia Gora | 38. Sieradz |
| 14. Kalisz | 39. Skierniewice |
| 15. Katowice | 40. Slupsk |
| 16. Kielce | 41. Suwalki |
| 17. Konin | 42. Szczecin |
| 18. Koszalin | 43. Tarnobrzeg |
| 19. Krakow-City | 44. Tarnow |
| 20. Krosno | 45. Torun |
| 21. Legnica | 46. Walbrzych |
| 22. Leszno | 47. Wloclawek |
| 23. Lublin | 48. Wroclaw |
| 24. Lomza | 49. Zamosc |
| 25. Lodz-City | 50. Zielona Gora |

Table 3. Structure of Arable Lands Designated for Nonfarm Purposes by Productivity Classes (in percentages)

Item	Arable lands			
	Productivity classes			
	total	I-III	IV-V	VI-VI ₂
(1) Polska	100.0	14.8	46.5	38.7
(2) Stołeczne warszawskie	100.0	29.2	47.2	23.6
(3) Białkopodlaskie	100.0	6.1	60.4	33.5
(4) Białostockie	100.0	1.6	13.0	65.4
(5) Bielskie	100.0	28.5	59.0	12.5
(6) Bydgoskie	100.0	7.3	39.4	53.3
(7) Chełmskie	100.0	22.1	61.0	16.9
(8) Ciechanowskie	100.0	3.1	33.3	64.6
(9) Częstochowskie	100.0	2.4	78.0	19.6
(10) Elbląskie	100.0	30.0	52.4	17.6
(11) Gdańskie	100.0	4.1	37.6	58.3
(12) Gorzowskie	100.0	2.7	47.5	49.8
(13) Jeleniogórskie	100.0	30.4	64.8	4.8
(14) Kaliskie	100.0	6.1	56.0	37.9
(15) Katowickie	100.0	16.9	70.6	12.5
(16) Kieleckie	100.0	8.7	50.3	41.0
(17) Koninckie	100.0	11.7	58.2	30.1
(18) Koszalińskie	100.0	8.8	43.6	47.6
(19) Miejskie krakowskie	100.0	42.3	52.4	5.3
(20) Krotwieńskie	100.0	35.8	59.9	4.3
(21) Legnickie	100.0	39.3	48.6	12.1
(22) Leszczyńskie	100.0	20.0	43.8	36.2
(23) Lubelskie	100.0	59.6	27.9	12.5
(24) Łomżyńskie	100.0	3.7	31.1	65.2
(25) Miejskie łódzkie	100.0	22.3	54.2	23.5
(26) Nowogódeckie	100.0	9.9	73.6	16.5
(27) Olsztynskie	100.0	6.9	51.2	41.9
(28) Opolskie	100.0	23.9	54.7	21.4
(29) Ostrołęckie	100.0	0.1	10.8	89.1
(30) Pińskie	100.0	2.5	28.5	69.0
(31) Piotrkowskie	100.0	6.5	54.7	38.8
(32) Plockie	100.0	17.9	52.4	29.7
(33) Poznańskie	100.0	15.6	55.3	29.1
(34) Przemyskie	100.0	54.9	40.3	4.8
(35) Radomskie	100.0	10.5	38.4	51.1
(36) Rzeszowskie	100.0	48.5	42.5	9.0
(37) Siedleckie	100.0	7.2	36.2	56.6
(38) Sieradzkie	100.0	15.0	56.6	28.4
(39) Skierniewickie	100.0	5.9	48.2	45.9
(40) Słupskie	100.0	3.2	30.3	66.5
(41) Suwalskie	100.0	1.0	37.0	62.0
(42) Szczecińskie	100.0	3.9	28.2	67.9
(43) Tarnobrzęskie	100.0	13.6	47.2	39.2
(44) Tarnowskie	100.0	29.4	63.6	7.0
(45) Toruńskie	100.0	2.5	26.1	71.4
(46) Wałbrzyskie	100.0	58.3	35.8	5.9
(47) Włocławskie	100.0	9.7	39.8	50.5
(48) Wrocławskie	100.0	52.2	40.0	7.8
(49) Zamojskie	100.0	48.9	20.7	30.4
(50) Zielonogórskie	100.0	5.6	45.0	49.4

Key as in table 2. Source: the author's calculations based on data from the ROCZNIK STATYSTYCZNY for 1977-1982.

Table 4. Structure of Arable Lands Designated for Nonfarm Purposes
(in percentages)

Province		housing lands	industrial lands	roads and communications networks	mine lands	other purposes
(1)	Polska	23.2	18.5	8.4	13.2	36.7
(2)	Stoleczne warszawskie	34.4	24.6	10.7	0.4	29.9
(3)	Białokopodlaskie	16.5	23.7	6.5	14.2	39.1
(4)	Białostockie	7.5	3.8	1.9	1.5	85.3
(5)	Biełskie	47.8	11.8	11.0	5.4	24.0
(6)	Bydgoskie	28.0	11.4	3.2	4.1	53.3
(7)	Chełmskie	15.8	24.4	9.9	12.0	37.9
(8)	Ciechanowskie	12.1	8.3	2.4	8.1	69.1
(9)	Częstochowskie	40.4	18.4	19.3	11.0	10.9
(10)	Elbąskie	35.1	42.2	8.4	5.9	8.4
(11)	Gdańskie	25.7	11.1	5.1	11.2	46.9
(12)	Gorzowskie	7.1	5.2	1.2	1.6	84.9
(13)	Jeleniogórskie	10.3	9.9	4.6	48.0	27.2
(14)	Kaliskie	30.4	24.6	5.2	4.4	35.4
(15)	Katowickie	25.6	31.0	10.7	14.0	18.7
(16)	Kieleckie	23.4	32.7	7.6	12.8	23.5
(17)	Konińskie	11.7	1.5	10.3	64.9	11.6
(18)	Koszalińskie	24.9	8.0	1.5	9.5	56.1
(19)	Miejskie krakowskie	45.9	17.0	18.9	6.1	12.1
(20)	Krosniewskie	47.5	9.4	19.5	11.4	12.2
(21)	Legnickie	12.7	52.2	1.3	5.5	28.3
(22)	Leszczyńskie	33.1	10.0	1.8	11.9	43.2
(23)	Lubelskie	39.0	21.0	10.8	6.2	23.0
(24)	Lomżyńskie	22.8	53.5	6.5	0.4	16.8
(25)	Miejskie łódzkie	34.2	29.0	13.2	2.2	21.4
(26)	Nowosądeckie	37.2	6.4	13.1	13.7	29.6
(27)	Olsztyńskie	25.6	9.7	1.5	12.5	50.7
(28)	Opolskie	37.2	30.5	12.1	19.1	1.1
(29)	Ostrołęckie	7.9	6.4	0.7	6.7	78.3
(30)	Pińskie	20.7	10.5	2.2	4.9	61.7
(31)	Piotrkowskie	6.8	19.5	15.9	50.1	7.7
(32)	Płockie	23.9	30.0	5.3	2.7	38.1
(33)	Poznańskie	40.5	20.5	18.0	4.2	16.8
(34)	Przemyskie	11.9	29.2	8.3	38.1	12.5
(35)	Radomskie	28.5	26.4	4.9	3.1	37.1
(36)	Rzeszowskie	35.0	43.6	7.2	4.5	9.7
(37)	Siedleckie	24.0	15.1	6.9	4.7	49.3
(38)	Sieradzkie	38.1	14.3	1.9	4.5	41.2
(39)	Skierniewickie	19.2	7.8	32.9	9.7	30.4
(40)	Słupskie	15.8	8.5	0.9	3.7	71.1
(41)	Suwałskie	13.3	14.7	4.3	6.8	60.9
(42)	Szczecińskie	5.5	23.9	9.3	5.2	56.1
(43)	Tarnobrzęskie	17.8	16.6	17.8	28.3	19.5
(44)	Tarnowskie	26.2	24.9	13.8	28.3	6.8
(45)	Toruńskie	27.2	10.0	1.9	5.6	55.3
(46)	Wałbrzyskie	7.8	20.2	5.2	29.9	36.9
(47)	Włocławskie	36.3	19.1	9.8	1.1	33.7
(48)	Wrocławskie	28.9	18.4	6.3	8.4	38.0
(49)	Zamojskie	23.1	10.7	14.6	10.0	41.6
(50)	Zielonogórskie	21.2	13.8	4.9	18.5	41.6

Key as in table 2. Source: author's workup based on data from ROCZNIK
STATYSTYCZNY for 1977-1982.

QUALITY OF DOMESTICALLY PRODUCED WHEAT SHOULD BE IMPROVED

Warsaw RZECZPOSPOLITA in Polish 18 Jul 84 p 3

[Article by Prof Marian Milczak, director of the Institute of Genetics and Plant Breeding, Agricultural Academy in Lublin: "The Quality of Polish Wheat Has Been Lost"]

[Text] Which of us ordinary bread eaters has not complained of its quality? The fact that it is not tasty, the fact that grows stale quickly and that in this way it is wasted in significant quantities, etc. The bakers and even occasionally one or another of the ministers hear about it in the mass media. I am not completely absolving those who are attacked because the art of baking bread and rolls must be responsible for something, but it is also naked truth that the producers of this everyday food lack good flour, specifically good wheat flour, since 1983 was a favorable year and there will be enough rye flour for 2 years.

The thin wallet of hard currency does not allow adequate imports of high quality wheat from the North American countries. Unfortunately in most cases (up to 73 percent), the wheat that we buy in our country has the qualities of low-gluten fodder grain; moreover, it does not even meet commercial and bakery needs. The wheat deficit is as much as 3,000,000 tons and involves especially high quality wheat.

A Review of History

I will help myself here with a quotation from the work of Prof Kazimierz Miczynski (1918), an eminent expert in this area: "Wheat grown in Poland was distinguished for remarkable grain, excelling over western and central European wheat in production of flour and in quality. This was why Polish wheat had for a long time been a sought-after commodity in the European grain market, and passed in no small quantities down the Vistula and through Gdansk ports to the West, where it was mixed with western varieties of lesser quality." At that time local varieties, Kujawska and Sandomierka, from the land of modern Poland, enjoyed world renown.

From more recent times, we must note the statement of Prof Antoni Biskupski, at a conference of the Society of Engineers and Technicians of the Food Industry in May of this year (Poznan): "Before World War II, Poland was a producer and exporter of high quality bakery wheat. Also, in the period

immediately following the war, cultivation of wheat in our country was distinguished by high technological quality of grain and flour."

Comparing these opinions with today's situation gives rise to the question, since things were so good then, why are they so bad now? How and when was the quality of Polish wheat lost? What can we do to rectify the basically disastrous situation in this area? Representatives of the baking industry are suggesting (for example, Prof H. Banecki): "It is essential (...) that changes be made in evaluating the activities of breeders, not just giving very good grades for high yield, but also for high quality of new varieties of wheat." Holy words, with just one addition, that producers profit from high quality of the grain.

Quantity and Quality

We must look for the prime source of deterioration of wheat quality in the short-sighted breeding concepts at the turn of the 1970's that gave preference only to the amount of grain from a unit area without regard for quality. The critical opinions expressed by some plant breeders and farmers were ignored. With great monopoly of wheat breeding, it was easy to eliminate competition that continued to offer qualitatively very good material (for example, RMO Borow winter wheat), well suited to less intensive conditions of cultivation, which are still common even now.

Beginning with 1970, a veritable revolution started in the assortment of varieties. Grana, Luna, and similar short-stalked varieties with poor grain qualities were introduced without thinking about where they were needed (wheat complexes) and where they were not needed (rye complexes); in this way varieties with theoretically lesser yield potential that had a good grain quality and great adaptability to light soils were eliminated from the register. What was the reaction of the farmers?

I will let one of them speak. Mr Bernard Ruhs from Chojnice wrote this to me in July, 1980: "In the local area, before introduction of high-yield varieties of wheat to be used by the whole region ... every second farm that had suitable soil grew wheat, and the proportion with respect to other grains was approximately 15 percent (in the district, light soils predominate). The following arguments favored growing those wheats: less crop competition, more modest demands with respect to soil and fertilizer, greater tolerance for poor weather conditions, and a longer straw stalk, which has no small meaning for production of straw brooms. The yield of grain was in the range of 24-36 quintals per hectare. Moreover, private farms basically have cow barns with deep litter and need a significant amount of straw, which the high-yield varieties do not produce.

"After the high-yield varieties were widely introduced, the area dedicated to wheat growing became limited because of the soil-fertilizer demands, and ordinary seed became unavailable. On my own farm, having grown winter wheat of the Grana variety for 6 years, there was only 1 year in which I was able to get a better yield of wheat than of rye. Taking into account the amount

of fertilizers and the requirements for a good location, the economic conditions favor the production of rye."

Here we have an answer to the unique paradox of the last few years when the area under wheat cultivation in Poland decreased from 1,985 thousand hectares in 1970 to 1,456 thousand hectares in 1982, despite an increased use of mineral fertilizers, clamorous calls for a reduction in growing of rye in favor of wheat, introduction of so-called high-yield varieties, etc., in a word, instead of quantitative progress, there was regression, and sometimes even a deterioration in grain quality. It is true that yield increased (1970 - 23.3 quintals/hectare; 1982 - 30.7 quintals/hectare), but this did not balance the decrease in total harvest (respectively, 4,608 and 4,476 thousand tons).

How Can We Escape the Impasse?

The truth is that in the immediate future we will not have hard currency for importing high quality wheat. The world market for rye is so marginal that we cannot count on exchanging the rye we export for the amount of wheat we need. We must simply increase national production of good quality wheat grain. This is good advice, someone will say, but how can we do this? Certainly not through administrative order, we have that bitter lesson behind us. Instead we might here paraphrase an old aphorism: render unto God what is God's and to Caesar what is Caesar's; produce suitable varieties for suitable soil-climate conditions. Obviously this means varieties with suitable technological merits. Measure the quality of varieties by the yield of bread or rolls per hectare, and not just by the amount of grain.

The first steps in this period have already been taken by introducing on a small scale (60,000 tons) the contracting of selected varieties of wheat with high technological qualities (1984). Here the higher price for the grain, in the range of 15-20 percent will play the role of stimulator. This decision certainly merits recognition, but is far from resolving the problem. We must, and soon, revise anachronistic regulations that pertain to the procedure for accepting new varieties into the register. The system for evaluating new sorts (candidates for varietal designation) is so absurd (more so than the historical feudal pyramid) that it not only eliminates new creations of breeders that might be very useful for small areas, but also limits the participation of small breeding establishments (for example, agriculture academies) where new forms of good quality are sometimes produced, frequently as a by-product of research work.

In the whole world, agriculture schools, or respective university departments, are a veritable smithy of biological progress, except in our country. Why? Don't they want to, or can't they fulfill this role? Obviously they want to, but in practice, they cannot. Regardless of the weakness in technical equipment and embarrassingly low financial means, a candidate from the Agricultural Academy can still make a name for himself as an author of a new variety in a group of marginal plants, but not in grains; it is impossible to overcome the thresholds and barriers of regulations in force with respect to grains.

Evidence from history confirms the possibility of producing good quality wheat grain on Polish soil. Progress in breeding during the last few years also indicates that it is possible to combine, in one variety, a high yield potential and a high grain quality that would satisfy the food industry. In order to assure stability in yield over the years, what we need is a large assortment of varieties suitable for various soils, for changing conditions with respect to both climate and for zones threatened by fungus diseases. With the alarmingly high acidity of soils, particularly the lighter soils, directional selection of new forms marked by tolerance for low pH of the soil, and, de facto, for a toxic clay content of the soil is indispensable. The genetic sources of this desirable trait are known, including local populations still cultivated in Podlasie. Agriculture schools should be included in the breeding program, and expert farmers, regardless of the sector, should be involved in the initial evaluation of new sorts.

My many years of working with farmers confirms the opinion expressed at one time by Docent Wolski that the modern Polish farmer is very receptive toward any progress, particularly the least expensive, biological progress. For this reason the road is clear for the rapid adoption of new varieties in actual practice. This possibility should be created as soon as practical, laying aside the old nonviable regulations. Time is pressing. I believe that we can have good bread and rolls from our own Polish wheat.

2950

CSO: 2600/1245

SITUATION OF LOSS-PRODUCING ENTERPRISES IN SLOVENIA

Zagreb VJESNIK in Serbo-Croatian 17 Aug 84 SEDAM DANA supplement pp 4, 5

[Article by Stane Pucko: "The Slovene Economy--A Time of Painful Decisions"]

[Text] Sharp debates on the Big Four. The Slovene public has its eyes on Gorenje, IMV [Motor Vehicle Factory], INI Lendava, and Ormoz Sugar Refinery. Thus far only the IMV resolution, to expire by the end of the year, is visible.

At the moment Slovenia would welcome an answer to the question of what the Slovene public thinks about its loss generators such as the Gorenje, the IMV in Novo Mesto, the Sugar Refinery, and others. The Institute of Public Opinion Research at the Faculty of Political Science, Sociology, and Journalism in Ljubljana is preparing a questionnaire for the fall as part of its on-going public opinion survey of topical problems, and if the questionnaire includes a question about the loss-generating enterprises, the answers will certainly be matters of keen interest to the Executive Council, the Chamber of Commerce, the Common Reserve Fund, bankers, planners, and politicians. Lastly, the Gorenje and IMV would also gain an idea of just what the public thinks about them and their future.

In public appearances representatives of the Motor Vehicles Factory are prompt in proclaiming their intention to favor the Gorenje over the IMV if society supports their rehabilitation efforts. The residents of Novo Mesto also accuse the press, radio, and television of giving more space to Gorenje than to them, especially in describing the efforts of the collectives to escape from the loss side of the balance sheet. It is difficult to determine who is right, since public interest has long centered on both collectives, and while it is true that more is written and heard about Gorenje, this can be ascribed to the proverbial aggressiveness of the Velenje organization in keeping the public informed.

Public relations have always been more intensively and better cultivated at the Gorenje than in Novo Mesto, and this is understandable. While a fierce battle was in progress on the domestic market for sale of kitchen ranges, refrigerators, and other desirable mechanical and acoustical products, it was necessary to wait until the IVs were on the market or pay for them in foreign currency. To tell the truth, while Gorenje was already the showcase of Slovene and Yugoslav industry, journalists have been called to Velenje only if there has been something good or doubtful to be told them at the expense of others.

Silence was wisely kept about the difficulties which probably were known even before the public immersion in a sea of red ink. The new management, which to a great extent is the current one, with the mission of putting this concern on its feet, is pursuing a different tactic. If the Velenje losses are no longer secret, it is better to keep the public informed of them and thus acquire the right to keep it informed of the successes which the concern is logging in the rehabilitation process.

Uncertainty

However, while we deliberately risk the danger that any public opinion survey of loss-generating enterprises may prove us wrong, we may receive the impression that Gorenje enjoys somewhat more sympathy than does the IMV, naturally, that is, if we can speak of sympathy at all, since the Slovene economy is very ill-disposed toward its loss-generators. The debates in the assembly about the big "red IV," which along with the Gorenje and the IMV also involve the INA Lendava and the Ormoz Sugar Refinery, and accordingly losses and loss-generators in general, have become very frequent, one might say traditional, and the summaries of the individual discussions have become traditional as well. Individual loss-generators would like to see in these debates verification of their rehabilitation programs, but on the contrary the programs are plainly and loudly rejected with the observation that the programs should be verified by those who are responsible for them. For instance, the Assembly of the Republic persistently directs the IMV to take a make-up examination, demanding repeated verification of the suitability of its rehabilitation plans.

This is what happened in July, when the IMV was told to come up, by the end of the year if not sooner, with a rehabilitation program more realistic than those of the past.

Insofar as the IMV is concerned, the assembly was unable to do otherwise. It simply had once again to subject 6000 workers to the torment of uncertainty because at the moment there is no clear-cut position and answer in Slovenia regarding the fate of the Novo Mesto automotive workers.

It is difficult to predict what the IMV and its rehabilitation advisors will offer in a new or revised rehabilitation program this year. There are currently three rehabilitation programs in effect. The first concerns automobile production, that is, assembly of the Renault X or XI, production of the IV, assembly of a smaller number of R-18's, and production of delivery and special vehicles. The second covers the production of components, and the third relates to the production of trailers.

Automotive production, above all, is open to debate. In a press conference this spring, Marko Bulc, president of the Slovene Chamber of Commerce, almost casually asked the rhetorical question of whether Slovenia needs passenger automobile production, all at once an invisible wall had been breached, that is, the reputation of the Slovene automotive industry summed up in the words "Made in Novo Mesto."

Doubts

To tell the truth, exactly 1 year ago one of the delegates from Maribor to the Slovene Assembly dissected the IMV rehabilitation program point by point, producing fairly substantial evidence indicating that such automotive production is senseless. But the advocates or representatives of IMV were still persuasive at that time, and it appeared that in collaboration with Renault, the IMV would carry out rehabilitation to the extent of 13 billion dinars, even though no one knew for certain where the money would come from. It turned out that indeed there was not enough money, the French partner became more cautious in action, business conditions worsened, and the IMV had to announce to the public this year that implementation of the rehabilitation program would be greatly delayed.

This year very serious thought is being given to the question of whether automotive production should be retained at Novo Mesto. The problem is not merely that of making up past losses. The fact is that few people in Slovenia believe in the profitability of investing more billions in the manufacture of passenger automobiles. In the past too many promises and megalomaniacal announcements were made, and the climate of distrust was intensified in particular by the situation in the Yugoslav automotive industry. The IMV believes that all three rehabilitation programs should be examined in connection with each other, since they are interdependent. Moreover, the people of Dolenje assert that halting automobile production would put about 4,000 persons out of work and that their reemployment or requalification would cost just as much as implementation of the rehabilitation programs, currently is based on already halved investments of 6.7 billion dinars. They are not enthusiastic over comparison of the IMV with Obrovac or Fenije, but at the same time let it be known that they are in the most difficult situation yet because of an indebtedness of billions to members of cooperatives, suppliers, and creditors, the interest alone on whose claims amounts to 4 billion dinars.

Respect

They are not giving up at the IMV, however. They are following in the footsteps of Gorenje, which very soon came to understand that it could count on the support of society only after it had made its maximum contribution through better business management. Today news comes from Novo Mesto as well that productivity is up almost one-fourth and that operating costs are down: production of the IV requires 6 kilograms less sheet metal and the consumption of 1 kilogram less varnish, and the production time they require is the same as in French plants. They have exported 13 percent more automobiles and 5 percent more trailers representing a value of 100 million dollars. They are working every day of the year, and all these efforts, with which they obviously wish to justify the existence of automotive production, deserve admiration and respect.

The Public

The IMV representatives also aim at using the public information media, which are introducing unrest and are exerting a disincentive effect with their

articles and surmises about the fate of the worker collectives. However, it is difficult to accept this aim. There are too many collectives in which the workers have not been adequately informed of the condition of their organization; in the past this has been the case at the IMV as well. The following assessment was recently made in the Slovene press: in the past the politicians vied with each other in praise of the industrial giants which changed the appearance of their areas. Jurij Ledicnik and Ivan Atelsek spearheaded the effort of those brave persons who plowed virgin soil and laid the foundations for the two giants later to become factors in development of the Slovene economy. They received the "Kraigher awards" as highly successful businessmen, but today listen in silence while reproach is heaped on the failure of their technocratic model for planning growth and enterprise management, a model of planning without planning, of growth without observance of fundamental rules of economics, a model of administration without self-management.

For this reason we can no longer accept the demand that there be no public talk about the situation and reflections on the future of the loss generators. What is this supposed to conceal from the workers, or what is it supposed to spare them? A shock stronger than the one caused by disclosure of the truth about the major losses after years of contrived glory surely cannot hit anyone at the IMV. The IMV unquestionably achieved great results in the past. It contributed a great deal to the development of the Lower Carniola area and the republic as a whole, but unfortunately also made many mistakes. Little is still known among the public about the fate of the homokinetic joint factory and the heavy plastics factory, which are in the category of projects that never got off the drawing board.

No extempore assessment can be made of the Novo Mesto automotive plant, but one thing is certain: the rehabilitation experts have not yet been able to draw up programs that would be acceptable to the Slovene economy, whose potential is divided among several key development projects, from investment in power engineering, production of steel, aluminum, etc, to solution of the problems of its representative loss generators. There is not enough money for all those wanting it, and the decisions will be very difficult and certainly very painful.

6115

CSO: 2800/460

ENERGY PLANS IN CROATIA TO 1990

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 22 Aug 84 p 3

[Article by J. Grubic: "Energy Facilities in Croatia to 1990: Only 5 New Electric Power Plants"]

[Text] Construction did not begin on a single power engineering facility in Croatia in the third year of the 5-year plan. The pertinent authority of the republic and the General Power Engineering Association of Croatia currently estimate that meeting of electric energy consumption needs to 1985 at the rate of 3.7 percent per year, and at the rate of 4.5 percent during the next 5-year plan, can be achieved by completion of the Obrovac 276-megawatt hydroelectric power plant and the Osijek 45-megawatt thermoelectric and thermal power plant, as well as by commencement of the final stage of construction of the 210-megawatt Plomin II thermoelectric plant and the Djale hydroelectric plant on the Cetina (40 megawatts) and the Dubrava near Cakovac (81 megawatts), which should be in operation in 1988 or a year later.

In addition, preliminary work should begin on the Caprazlije and Lepenica reservoirs, the Brodarci locks, and several smaller hydroelectric power plants, which should be completed by 1990. It is especially important to begin construction, in collaboration with Slovenia, of the nuclear power plant in Prevlaka (500 megawatts), to be ready for operation in 1993. It is a question also of the transmission facilities, the ones to be completed and new ones, as well as construction of the electric power industry dispatcher control center, studies and research projects, and replacement and rebuilding of old power engineering facilities. According to optimistic estimates, it will be necessary by 1985 to secure a total of more than 30 billion dinars for these purposes, or slightly less than 1/3 of the total investment funds needed over the 1983-1990 period (not counting around 30 billion dinars needed for building structures and grids for electric energy distribution).

This enumeration does not, of course, cover everything. Croatia is still dependent on imported petroleum, and would be even if the total production in this republic were to offset its consumption. Natural gas will consequently occupy an increasingly important place in the energy consumption structure, but until 1990 there will be an obvious disparity between needs and the amounts that will be available, including imports (about 840 million cubic meters annually).

There are prospects for reducing the share of liquid fuels in the energy consumption structure by the end of this decade, by increasing coal production in the Istrian coal mines for the Plomin II thermoelectric power plant, by revitalizing the old mine sites in promising regions of Croatia, above all at the Vojakovac Monastery and Brege near Koprivnica, and by pooling funds to ensure a supply for current consumers of coal from mines in Bosnia and Herzegovina. This is uncertain, however, especially since it is not possible to replace fuel oil with coal at the Rijeka and Sisak thermoelectric power plant. It would be necessary to build new boilers, obtain coal and solve the problem of transporting it, and this is not feasible over the next 7 years.

Additionally, the cause of the delay in construction of power engineering facilities is above all the unrelieved economic situation of all power engineering sectors, and especially the electrical industry, as a result of which they are unable to ensure simple reproduction, while some of them absorb development funds in order to cover operating losses. Hence the unrealistically low and economically inefficient prices should be eliminated as soon as possible. There is a need for the effective institution of automatic establishment of prices of all energy sources on the domestic market as a function of the fluctuation of their prices on the world market, as well as automatic regulation of parity of the dinar with the dollar. Only in this way, along with regulation of the acquisition of funds, is it possible to stabilize the sources to finance new power engineering facilities and to extract the power engineering, equipment manufacturing industry from its current unenviable situation.

Since, in view of the electric energy shortage, this energy source cannot represent a reserve for making up the deficit of others in the energy system, it is obviously justified to insist on full utilization of the hydraulic potential of the Drava, and especially on exploration of the material possibility of a transition from fuel oil to coal operation of about 400 boiler installations at current generating stations of industrial associated labor organizations.

6115

CSO: 2800/466

SLOVENIA SUBSTITUTING GAS FOR FUEL OIL

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 22 Aug 84 p 3

[Article: "Natural Gas Replaces Petroleum Derivatives in Slovenia--Planners Also Surprised by Substitution"]

[Text] Natural gas imported from the Soviet Union has been successfully replacing fuel oil for 7 years now in Slovenia. In 1983 gas accounted for 13 percent of the total energy consumed in Slovenia, while fuel oil consumption declined from 988,000 tons in 1980 to 541,000 tons in 1983. Over the same period gas consumption rose from 513 million to 794 million cubic meters. The speed of this process of replacement of petroleum derivatives with gas has surprised even the planners, since the energy budget for this 5-year period calls for a petroleum derivative consumption of slightly more than 920,000 tons in 1985. Yet it was almost half this amount even in 1984, thanks to the heavier use of gas.

Interest in gas continues to grow among consumers in Slovenia. This is indicated by the fact that there are 86 signatories to the self-management agreement on implementation of the gasification program in Slovenia. More than half of them are major industrial consumers. New imports of gas are also expected from Algeria. Negotiations are in progress, and 24 new consumers will be connected to the gas pipeline network.

Additional investments are needed for expansion of the gas pipeline network. It is estimated that it would be necessary to assemble more than 670 million dinars to effect connection with the Italian gas pipeline, through which gas will be piped to Slovenia from Algeria. It will be necessary to invest about 700 million dinars, and 512 million dinars of this amount in 1985, to finance construction of the connecting stations. A third major investment in the gas pipeline system is represented by construction of an underground storage facility, this investment being estimated at about 2.3 billion dinars.

6115
CSO: 2800/466

END

END OF

FICHE

DATE FILMED

14 Nov 1984